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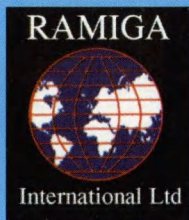
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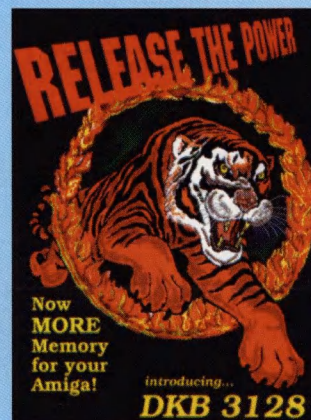
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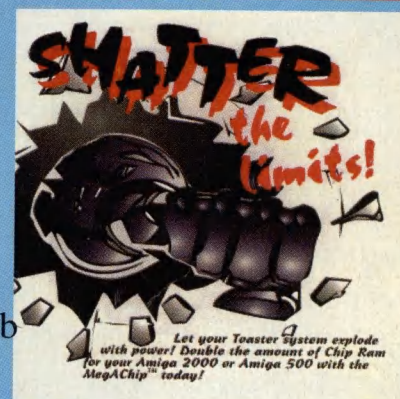
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Amiga Version: Amiga computer, 2mb RAM, AmigaDOS version 2.0 or higher, 3.5" floppy drive, system hard drive. (If using the Video toaster, you will need 9 mb RAM. VT4000 users will need 2 mb chip RAM. When integrating other video equipment, consult manufacturer's documentation.)

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5 The Amiga Dimension

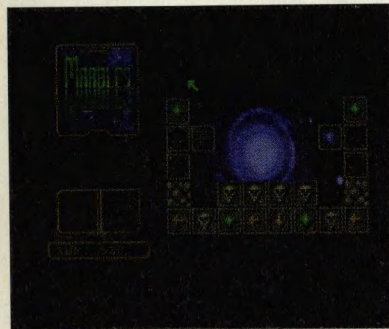
Managing Editor Antony Jacobson suggests that though most Amigas were bought as games machines, to survive the Amiga needs to be taken more seriously in future.

8 SuperDisk No.51

From video-titler to screen switchers, this disk even includes a demonstration game for the new Amiga language, HeliOS. Can it blitz BASIC? Find out exclusively from **AUI**. David Taylor introduces the two Megs of goodies on this disk.

12 SuperDisk No.52

Four more games to keep you young. A fantastic soccer manager, an addictive puzzler, a superb shoot 'em up and a chess game. All brought to you courtesy of the brilliant Amiga programmers and given the full **AUI** treatment.



16 NewsFile

Eight pages of the wonders of the computer world are offered for your delectation by those newshounds with their noses to the electronic ground, Anthony Mael and Martin Witton.

12 The Video Column

Alan Puzey brings the home video and the Amiga closer together with a look at what's new on the scene.

72 Edutainment

The edutainment market welcomes another set of educational titles, this time starting with a French program from Coombe Valley. Martin Witton says "Bienvenu"!

78 Online - The Internet Column

Gary Fenton continues his guide to the TInternet, taking a look at the services available for you, your Amiga and your telephone.

90 Programming Tips

Menu options, Intuition and a sneaky trick or two. Paul Overaa reveals the connection.

91 ARexx Info

What's the secret behind Paul Overaa's ARexx knowledge? Find out here and play with the examples on SuperDisk No.51.

92 The PD StakeOut

Gideon Overhead scours the Domain, plucking out his prey with the beadiest of eyes. Swooping down, he claims the free goodies for **AUI** and for you.



99 Amiga Answers

His postbag overfloweth? Andy Eskelson leads the lost one from the wilderness with his steady hand as he solves your every Amiga problem.

100 Write to Reply

Scalpel at the ready, the letter surgeon Bud Vennos dissects your comments and administers the cure. Will it be penicillin or arsenic?

113 Opinion

What's with these guys asks June Williamson, why, oh, why, can't Amiga programmers have a little more imagination with female characters? Must they always think with their you know whats?

TEST DRIVE

26 MainActor

Helmut Schumeacher takes the stage test driving an exciting new titling program from Germany.

28 HeliOS

An **AUI** exclusive! Paul Overaa test drives the latest language for the Amiga which has claims to be one of the fastest around. Does it make the grade?

32 Turbo Clock

What do you do when your Amiga doesn't have a clock? Well, there may be an answer. Get this little fun gadget and have a digital clock through your disk drive of all places! Mark Blackham finds the time to investigate.

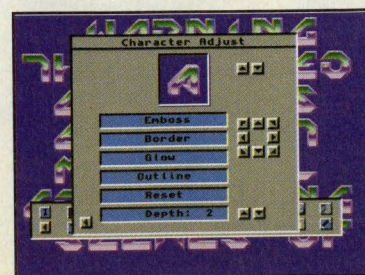


33 Star Gazing

Everyone needs a printer. Is there a room for another two? If they're Star products maybe, but has this star fallen? Mark Blackham's Test Drive of them is here in print.

34 Pizaz

Video Titler's are useful pieces of software. There's one on SuperDisk No.51. Are the commercial releases worth the money? Gary Fenton puts this effects package to the test.



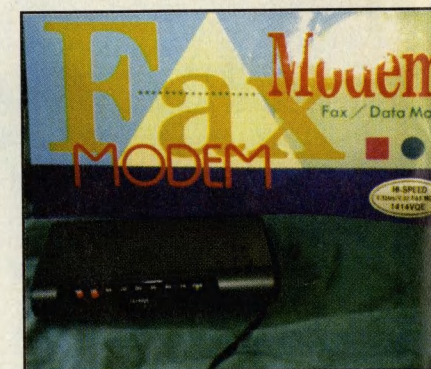
36 Samsung SyncMaster 3Ne

A sight for sore eyes? This monitor may be just what you're looking for. Aitor Ibarra sees the light.



38 Getting Online

Is this a mistake? Two Online's in one **AUI**? No, because this is the Online Fax/Modem to get you, well, online. Gideon Overhead sorts out the confusion.



40 Final Data

A database that links to all your packages? How can this be? Do we want it to be? Mark Blackham answers the questions.

48 The Single Floppy WordWorth

Mark Blackham checks out the rejuvenated Wordworth 3.1 that's designed to run on a single floppy Amiga. Does it retain the power of the full version?

FIELD REPORT

44 Computer Graphics Expo

The 1994 Computer Graphics Expo showcased some amazing developments for all concerned. As usual the **AUI** team were there to report back. Mark Blackham and June Williamson tell all.



50 World of Amiga

So, just what is there to say about 1994? If there's anywhere you'll find out, it's here. Mark Blackham dons his walking shoes again and takes a gander around.

74 Light Fantastic

Wil Mobberley takes off his hat as he steps into the presence of a higher being. Is the man behind LightWave as good as everyone says?

HARD COPY

76 The Amiga Guru Guide

Almathera spread their wings again and this time come up with a comprehensive guide to help out when everything goes wrong. Paul Overaa reviews.

Entertainment Now

80 Entertainment Now!

Andy Moss, Mark Blackham and David Taylor play away at the latest entertainment releases: Lords of the Realm (Impressions) Premier Manager 3 (Grem-lin) Fields of Glory (Microprose) Alien Breed - Tower Assault (Team 17) Rise of the Robots (Mirage/Time Warner) Sim City 2000 (Maxis) Marvin's Marvelous Adventure (21st Century)

PLUS

Previews of: Worms (Team 17) Death Mask (Alternative Software) Pussies Galore (Team 17) Valhalla - Before the War (Vulcan Software)

42 Subscription

Special Offers abound with **AUI** offering a special New Year's subscription rate. Get up to three issues FREE!

55 Virtual Worlds! Exclusive Report



When bits and bytes start to create new worlds, the **AUI** team, led by Martin Witton, investigates the uses to which the world is putting virtual

reality. There's a lot more to it than playing games, we can and do tell you.

Who Does What

Managing Editor and Publisher:
Antony Jacobson

Editorial Co-ordinator: David Taylor
Editorial Assistants: Mark Blackham, Gideon Overhead

Contributors: Andy Eskelson, Gary Fenton, Aitor Ibarra, Anthony Mael, Barry McCarthy, Wil Mobberley, Andy Moss, Paul Overaa, Alan Puzey, Helmut Schumacher, Bud Vennos, June Williamson, Martin Witton.

Design: Graham Baldock

Advertisement Executive: Charles Cutbill

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Editorial & Advertising:
Amiga User International
4th floor, Building 3, Carriage Row,
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Telephone: 0171 391 8833

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Customer Interface Ltd, Bradley Pavilions,
Pear Tree Road, Bradley Stoke,
Bristol BS12 0BQ
Telephone: 01454 620070
Fax: 01454 620080

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...And What They Used

Commodore's Amiga A3000, A2000, A500, Citizen's Swift 240C, Canon's BH-20 Bubblejet, Consultron's CrossDOS, Electronic Art's Deluxe Paint IV, Gold Disk's Professional Page, GVP's A530 Turbo, Toshiba's IDE drive, Supra's V32 Fax Modem, Datel's Action Replay MKIII, ASDG's Art Department Professional, Epson's GT-6500 and 9000 colour flatbed scanners, Readysoft's AMAX, OpalTech's Opalvision, Innova-tronic's Directory Opus, JCL's ColourPic Plus and Cabaret, John Veldhuis' VirusChecker, JVC's HR-D980 Video Recorder, Micro-System's Scribble!, Macro Systems VLAB, 32bit RAM from First Choice Computers, Discovery Software's Grabbit.

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The Amiga Dimension

There is an Amiga show. Thousands of Amiga users pour in. People buy and sell products, games and productivity, hardware too. The Amiga users are obviously keen and many are very knowledgeable. Most visitors are not young kids. They look experienced and know what they are after.

They are interested too in what's happening to Commodore. The Amiga dead? This Show doesn't look like a funeral or a wake. From what you can see, especially from the Wows! around the stands showing off products like LightWave, the Amiga is alive and - as someone says gazing in awe at the legendary NewTek program - still kicking ass.

To their surprise, the games companies have found, despite the almost complete absence from the chain stores of Amigas to be bought, that it's still been an Amiga Christmas. The games for this apparently moribund machine have been selling very well. Even the Amiga CD 32 has had its successes with well-made products such as Theme Park.

But the big question is whether it can keep on keeping on. The games that are coming out now were put into development months back. Are more being started now? Probably not so many but still there will for some time yet be enough to satisfy what remains a very substantial following.

How many Amigas are there in the UK? How many in the world? No-one can accurately know. A reasonable guess might be 1.5 million in the UK and 7 million globally. I personally think that far fewer than with many other machines have been dumped away in cupboards or turned into the famous doorstops.

As far as **AUI** is concerned not all those 1.5 million or even a very large proportion of the 7 million were ever likely to want to be a part of the Amiga Dimension with which we have been involved over the years since **AUI** pioneered the Amiga magazine market in Europe. Most Amigas, we have to sadly admit, were bought as games machines. Anyone who acquired an Amiga for that reason was not going, in general at least at the outset, to want to read an **AUI**-type magazine presenting the case for a lot deeper involvement with this potentially very powerful computer than a reflex-testing shoot 'em up which could be played almost equally as well on a console. They read the magazines that filled their pages with games reviews and 'exclusive' about releases from would-be trendy programmers photographed against brick walls, wearing shades and trying to look like rock stars.

But the real Amiga Dimension went on maturing. The more serious uses, for which the computer was ideally designed, continued to offer great rewards for those who were willing to buck the conventions of the Mac or PC. And the audience for **AUI** continued and we are glad to say continues still to find a substantial interest in the developments well outside the games field. However, what is concerning me, and others in the Amiga Dimension whose interest is not mainly games, is whether with its present troubles there is going to be a continuance of the development of serious relevant products for the Amiga. For good products to arrive this time next year, they should be starting now. I am sure a market exists and will continue to exist. But if one of the buy out groups gets the Amiga the obvious market will again be the mass one - for the games buyer.

I say obvious but I think that choice could be a mistake. The Amiga has missed this Christmas toy buying season and the opposition in 1995 will be formidable, maybe too great for a new company to overcome. The possibility for the Amiga, and now it is only a possibility, of survival is one where the real Amiga users, the users who will upgrade and buy the products that make their machine more and more powerful, are able to play a part.

There is little or no loyalty in the games market. The companies there will switch their developments without a care to another format and are already doing so. But whoever wins the Amiga prize would do well to think of a more than short term vision of the future. I believe that future will fail if it is dependent on the games market. If the Amiga is to rise again then it has to be a machine that is taken seriously. I'm not biased, of course, but that is what **AUI** has been helping to do all these years, isn't it?

Antony Jacobson
Managing Editor and Publisher

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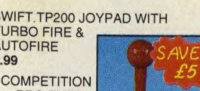
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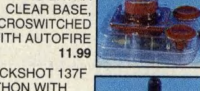
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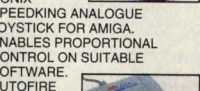
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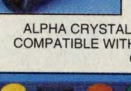
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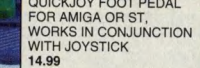
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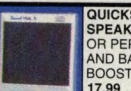
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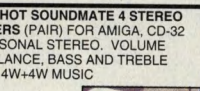
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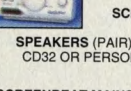
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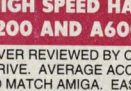
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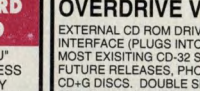
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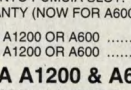
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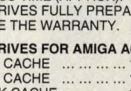
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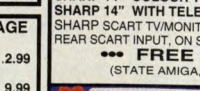
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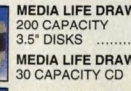
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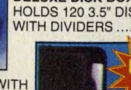
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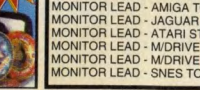
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AMIGA

User

INTERNATIONAL

Greetings fellow Amiganoids! This is our 51st SuperDisk and contains yet another 2 Megabytes of gobsmacking goodies. Buckle up as David Taylor takes you on a ride...

Instructions for SuperDisks No.51 and No.52

Put quite simply - boot SuperDisk No.51.

You need six spare disks. The SuperDisk will take a minute to load the installation programs and then ask you to select a disk number (1-6). Choose the disk and press return.

Follow the on-screen instructions and insert the disk when you are asked. When you are requested to insert a disk and then press return, remember that the Amiga requires a second to validate the disk, so wait while the disk light flashes or you may cause a problem.

When you open up the utilities disks, you may want to "clean up" (from the windows menu) to make everything more aesthetically pleasing.

If you can't get it to work, read the Faulty Disk section on these pages.

gramme, The Chart Show, uses (also produced on Amigas).

ScrollText will scroll text horizontally across the screen, as used on many breakfast programmes.

Credits needs no introduction - if you can't guess how this works, then you've never seen TV!

Countdown Timer is of the gameshow ilk, counting time down and pausing if necessary.

There are lots more effects, and they are all detailed in the excellent documentation. This version is the Shareware version and does have a few effects disabled. If you like the

rest though, you'll be eager to register soon enough.

Disk **AUI 51b**

Landscape

This program is for all the green fingered Amiga users. You can design your garden without leaving your chair! Simply map out the shape of your garden and then fill it in. Add the lawn, paths, trees (remember to get the right type of tree) and flowers, and then view it from any angle. You could then

Disk **AUI 51a**

Pro-Titler

Well, here is yet another incredible program brought to you by **AUI**. With such a number of commercial video titlers, both old and brand new (see this month's Test Drives), here's a challenger from the public domain. You'll be surprised at how well it compares!

Pro-Titler is intended for use primarily by users with a genlock, but provides effects that should be of interest to everyone. There are plenty of video titlers out there, but Pro-Titler contains a number of original effects.

If you are loading from floppy, load Workbench and then click on the "floppy load" icon (NOT the Pro-Titler icon). The program will then load. When you start, select which effect you want to use. Enter your text into the window and let Pro-Titler do the rest. Some of the effects can be defined further, such as their X/Y positioning on the screen.

To give you an idea of Pro-Titler's capabilities, here are some of the effects.

TV Trailer resembles the US TV captions for TV programmes and can be used for credits. They will wipe on and off the screen.

Icon Captions is designed to clone the effects that the ITV pro-

Fractals make great backdrops
for your credits...

EATS UP MEMORY THOUGH..

The power of Pro-Titler lies in its ease of use.

SuperDisk No. 51

put in everything you were thinking of having in your garden and get the Amiga to render it for you from the angle that you're most likely to see it - your living room window maybe. Of course, you can always take another look from another angle and get a good idea of how it all looks.

This way, you won't end up with a twenty foot conifer in just the wrong place. Your results can be saved as IFFs even, so if you want a garden picture to use in a paint package, Landscape may be of use there.

Lottery

Well, the national lottery is up and running and already making millionaires. Don't tell us, you're not one yet!

Maybe this lottery predictor can help. It will pick your numbers for you, based on a random number generator. The author reasons that since the numbers are picked randomly, choosing them this way will be more likely than 'picking' them. Simply take the numbers and enter your ticket.

ToolType

ToolType is a program to help you manage the icon files.

This is the ToolBox program for this month. For more information see the Amiga Answers section.

ScreenTab

If you've used a PC, you'll know how you can tab through the screens and select one. The computer will then automatically choose that screen and select it, jumping there.

This program replicates this on the Amiga. It's cool!

HotMaps

If you have reason to want to write in different languages, then you'll know how frustrating it is to have swap keymaps or at best use a character selector in one of the better WP packages. No more! This util will allow you to have two keymaps at your disposal. You can flick between them with a keypress making it a fantastic program.



AUI, AUI, how does your garden grow? With bits and bytes and a 68020 to run the show..

WBFlash

This little hack will make your icons and windows glow and colour cycle. Either you love it or hate it. Some of the **AUI** staff think it's the snappiest thing since the rebirth of psychedelia. Others think it's the best way to get a headache!

Simply replace the old one. You need **AUI** December 1994 for this. Read the docs for instructions.

SuperDisk

This directory contains the scripts used in the installation. It's there for people you want to see how it works, expert users who need to know where files are and just the plain nosey folk. It's also handy if you're interested in how the shell works.

Book Corner

Disk **AUI** 51b

Among all the utilities on this disk, you'll also find a complete e-text guide to e-mail and the Internet. It's an ideal accompaniment to the **AUI** Online column. For beginners and experts alike, you'll find it interesting and informative.

Reading it couldn't be easier. If you're using Workbench, then simply double click on the "Book of the Month" icon. If you want, you can simply boot this disk and the e-text will be loaded. This is to make everything easy for you.

The other utilities on this disk do need Workbench, so if you don't want to read, don't boot this disk.

Lonelylcon

If you've got a hard drive, then the chances are you'll have icons floating around from programs you've long since deleted. This command will seek out these widows and generate a list. It will not delete them, because some widows are there for a purpose. It will though make it easier for you to track down those renegade icons.

ARexxCode

This area contains the code referred to in this month's Arrex Info.

HighOctaneFix

For the few people who have a system that had problems with High Octane on December 1994, here's a new version.

NATIONAL LOTTERY RANDOMIZER by Garry Knott

£1 BOARD A	£1 BOARD B	£1 BOARD C	£1 BOARD D	£1 BOARD E
1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
6 7 8 9 10	6 7 8 9 10	6 7 8 9 10	6 7 8 9 10	6 7 8 9 10
11 12 13 14 15	11 12 13 14 15	11 12 13 14 15	11 12 13 14 15	11 12 13 14 15
16 17 18 19 20	16 17 18 19 20	16 17 18 19 20	16 17 18 19 20	16 17 18 19 20
21 22 23 24 25	21 22 23 24 25	21 22 23 24 25	21 22 23 24 25	21 22 23 24 25
26 27 28 29 30	26 27 28 29 30	26 27 28 29 30	26 27 28 29 30	26 27 28 29 30
31 32 33 34 35	31 32 33 34 35	31 32 33 34 35	31 32 33 34 35	31 32 33 34 35
36 37 38 39 40	36 37 38 39 40	36 37 38 39 40	36 37 38 39 40	36 37 38 39 40
41 42 43 44 45	41 42 43 44 45	41 42 43 44 45	41 42 43 44 45	41 42 43 44 45
46 47 48 49	46 47 48 49	46 47 48 49	46 47 48 49	46 47 48 49

GENERATE NUMBERS **PRINT NUMBERS**

Are these the numbers that will make you rich?

Expert User

If you like an easy life, DO NOT read this! Simply install the disks the easy way.

If you want a challenge, read on...

If you are an experienced user, then you may want to install the programs yourself, instead of letting the SuperDisk do all the hard work.

Why? I spent weeks on that script. Isn't it good enough for you? No, seriously, if you want to do this manually, then it will take a bit of effort.

You will need to de-archive the commands.lha from SuperDisk No.51 C: directory. If you don't have the 'lha' command on your system, copy it across or use it directly from the SuperDisk. The command from Shell should read: "Superdisk51:c/lha x Superdisk51:c/commands.lha ram:".

In RAM: you'll now find a set of directories (no icons, so view all files). There is a devs drawer which contains the device, icons and mountlist necessary for the Amiga to read SuperDisk No.52 (which is a special disk formatted to 959K, thanks to the diskspare.device supplied by Klaus Deppisch). These need to be copied to your devs drawer. The mountlist needs adding to your own mountlist. DO NOT simply copy it as it would erase your own mountlist.

The Amiga will need rebooting. It can now read the disks formatted to 959K. Cool, eh?

Then simply dearchive the programs you want. Either the whole archive or individual programs. They are stored in a directory called "archives" on both SuperDisks. To see the syntax of "lha", type "lha ?" or "Superdisk51:c/lha ?" if you are using it from the SuperDisk. Something like "lha x Superdisk51:archives/AUI 51b.lha bookcorner/email025.txt ram:" would make sense though.

Because of the way the scripts work, re-using some commands, it might be an idea to de-archive that disk (AUI 51b) from the disks first using the normal procedure. That way you'll have more idea what's going to be needed. You could also then doctor those scripts, removing the format command, for example, should you already have blank disks ready.

The scripts did take a great deal of effort (four Megs don't fit on two disks any old how!), so I'd advise only using this method if you understand what you're doing and want to play. Make sure you know what 'Diskspare' is - ideally you'll have last month's SuperDisk with the actual program.

In short, don't come crying to us if you mess up. The installation procedure is as simple as it could be - you decided to spurn it for this (more fun?) path!!!

There you go. Good Luck!

Nobody ever said life would be easy.

Remember: always work on copies of your Workbench disks.

NO SUPERDISK?

Consult your Newsagent! Explain that you know that AUI SuperDisks are irresistible, but that you need them. Seriously though, we cannot be responsible for what happens at the end of a very long chain of different organisations, especially those outside of the country. So what we propose is simple: If you live in

the UK, consult your newsagent as usual. If you are outside the UK, then we'll try our best to help you get the advantages of the SuperDisks. If you don't receive them on the cover, then send us £1 in sterling (International Money Order, etc) to cover postage, etc and we'll get this month's disk to you ASAP. Okay?

FAULTY DISK?

In the VERY unlikely event that you do have a problem, turn off your Amiga and wait 30 seconds, then boot it again with SuperDisk No.51. Ensure that you follow the instructions to the letter. If you have only 1 Meg, then you may find a problem with memory fragmentation if you don't install the disks in numerical order. Just switch off to allow the memory to reset and then start again.

If this doesn't help, then it sounds like you're got a disk with a read/write error on it, caused in duplication. It's very rare but it can happen. Don't worry! A replacement disk can be obtained easily by sending the faulty disk to:

AUI Faulty Disks

Unit 3, Hampton Road Industrial Estate, Tetbury, Glos. GO8 8LD
Don't forget to include your name and full postal address in block capitals.

A PLEA

We have gone to every effort to make the SuperDisk easy to use and to ensure that all the programs work on as many systems as possible.

We regret that we cannot take any telephone calls concerning SuperDisk problems. They are just too time consuming and then we wouldn't have time to put the next SuperDisk together for you.

If you do have a problem, try the docs again and refer to your manual, should you need to move any libraries or assign any programs. If you are truly stuck, please write to Amiga Answers.

BBSs

Thanks to Simon Gardner of Burning Chrome BBS on 01428 727060. Much Gratitude to Jimbob, the supportive Sysop of the excellent Waltons' Mountain BBS, on 0181 891 5730. Faulty Towers shouldn't be omitted, available on 01235 535113. If you want to be truly international, then check out the splendid American BBS Smorgasboard, on 205 745 3989.

Readers' Contributions

AUI's SuperDisks are crammed with the cream of Amiga crop. Many of the programs are created especially for us and released into the Public Domain through us. It's you the reader that makes it possible for AUI to continue to share top quality software with tens of thousands of avid Amiga users.

If you've got a masterpiece that you think can cut it with the best, send it to: SuperDisk Contributions, Amiga User International Magazine, Fourth Floor, Building 3, 203 Eversholt Street, London, NW1 1BW. (NB. This is our new address. Send them here, not to the address mentioned on the SuperDisk.)

It's best for us if you don't use Powerpacker, because we use lha to archive, which is far more efficient. It will also help if you tell us which libraries or fonts your program requires, keeping them to a minimum if possible. So, if you're sending an AMOS program for example, try to avoid the need to have the AMOS library separately. These guidelines make life jolly for everyone.

Happy compiling!

Shareware

Just a brief reminder that some of the programs on our Coverdisk are Shareware. This means that you can try them out, but if you regularly use them you should send a registration fee to the author. Registration fees are between £5 and £20 and sometimes the author will send you the latest version in return. You can send an International Money Order, or preferably a cheque but many authors don't accept cheques if they are outside the UK. If you want to risk sending cash in a registered post, it's up to you. We wouldn't advise it but it's your money...

Compatibility

These SuperDisks will only work on a 2.0+ Amiga with one Meg of Chip RAM or more. If you don't have 2.0 and are still laugishing the 1.3 or less dimension, we're sorry but the only answer is to upgrade. There's no way we could fit nearly four Megabytes onto the OFS disks and these days most programs are Workbench 2 and above anyway. So if you haven't already, upgrade.

All the programs work on A1200 and most on A500+ and up. The best way is to read the docs and try them out. If they don't work, read the docs again and ensure you have updated any libraries that the program needs. Read your Workbench manual to see how to do this.

If it all goes horribly wrong, please WRITE to Amiga Answers at the address shown on page 101. DO NOT RING; we cannot answer queries over the 'phone.

Documentation

All the plain documents can be read simply by double clicking on their icons. The text will scroll, use the mouse to control it and press Escape to quit. If the docs are in AmigaGuide format, you'll need a computer that can read AmigaGuide files in order to read them without all the nodes showing.

The docs can also be loaded into any WP that reads ASCII, which is just about all of them.

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 **Almathera**

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AMIGA

User

INTERNATIONAL

The AUI Great Games SuperDisk

The fifth AUI games disk has five complete games for you. As ever, the blend of games is designed to suit everyone's palette. David Taylor pops the cork.

The instructions for decrunching these games can be found on page 6, with those for SuperDisk 51. To get started though, boot SuperDisk No.51 (the other one). Each decrunched disk will autoboot.

Disk AUI 52a

Scottish Football Manager

So, Premier Manger 3 didn't live up to expectations. Could this be the answer?

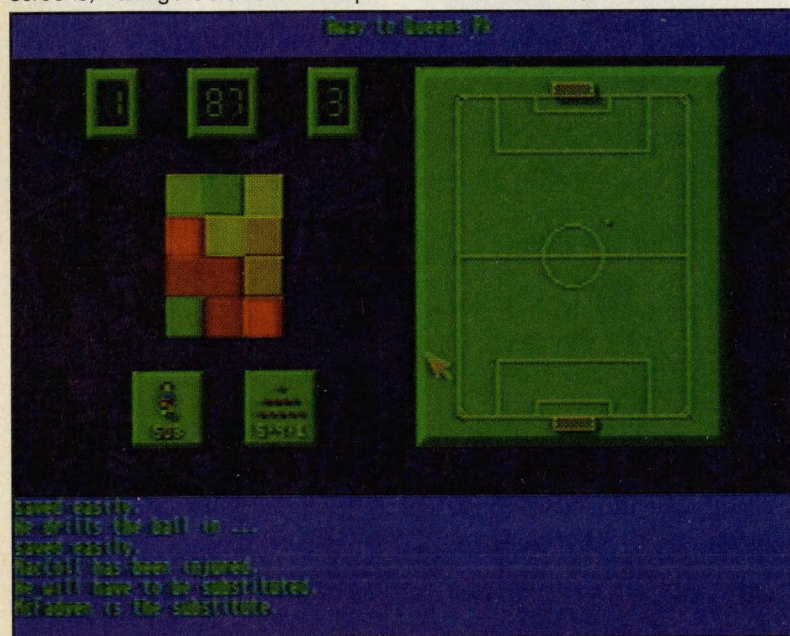
Scottish Football Manager is a great way to get started in football management sims. After the game has loaded, you can pick your team. Then, you'll need to click through the various screens, making the draws for the cups.



The main menu has all the usual options.

When you get to the main menu, everything should be quite simple to work out. There's an icon for the ground improvements (you won't be able to afford those straight away), one for player information (your team is likely to be pretty awful), one for transfers (could a star player be the

The match reports all the tackles.



answer to your team's performance problems?), team selection (the best of a bad bunch?) and, of course, the match.

Make sure your team is playing an appropriate formation for the players and see how you do.

The match screen shows the pitch and gives you an ongoing report of the game.

When the game is over, it's time to assess your decisions. See how much money you've made and start over, deciding where to invest the cash. You have five seasons to make your mark.

See you in the changing rooms! Nod-nod-wink-wink.

Disk AUI 52b

Marbles

All you've got to do is get your bouncy marble from A to B. That can't be hard, can it? I'm afraid it can!

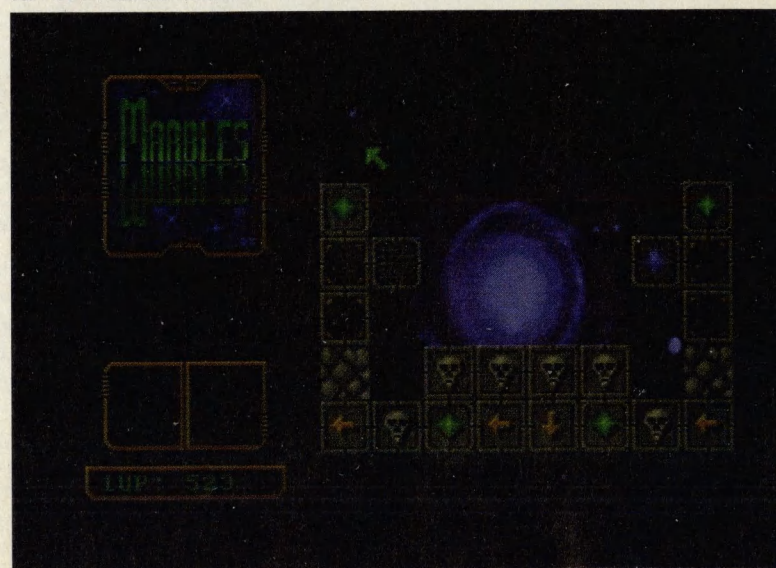
The blocks between the two places have different properties. A normal one will allow you to jump on it once and disappear when you hop off. There are one's that will bounce in a certain direction, ones that kill you instantly, teleports, etc.

If you come to a level which has gems on, you'll also need to figure out how to pick up all the gems on the way to the exit.

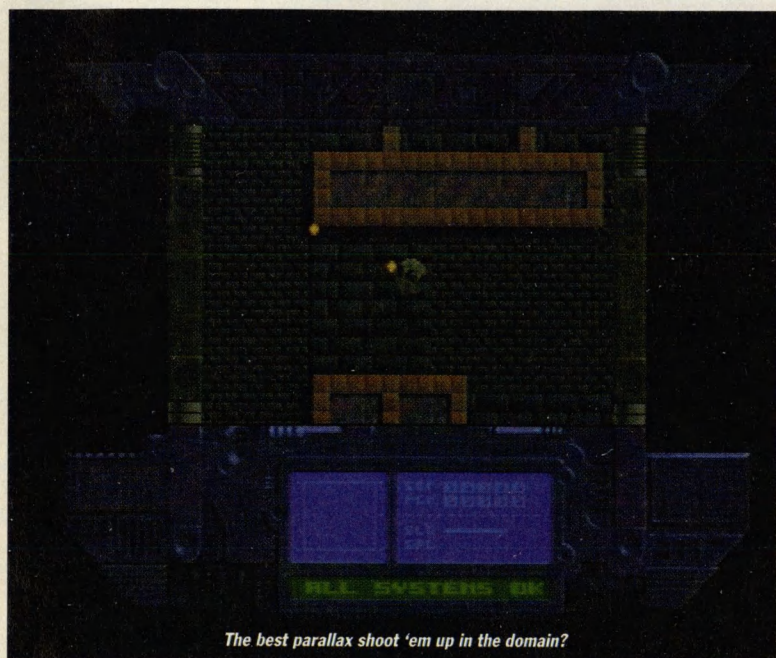
Marbles is easy to play and control. Click the left button and you'll jump to where you're pointing. The right button will select a tile and can be used to swap the tiles around to set up the course you need to reach the exit.

This game also has a level generator. So, if you manage to complete the ones you've got, you can create some more! Place your blocks where you want, and choose the

Get your thinking cap on. It's fun, it's addictive and it's all here!



SuperDisk No.52



The best parallax shoot 'em up in the domain?

different types, all the options are simple to work.

WipeOut!

We were so awed last year by a game called WipeOut, that we put it on our SuperDisk. It has now been updated. It should run without a hitch on WB2 and 3 now. The gfx have been spruced up too.

The aim is simple. Survive. To control your spaceship, rotate it with

your joystick and then move forwards. Fire at anything. Some power-ups can be found, but they're scarce.

Take your time on the first levels to get used to the controls. The advantage on these levels is that the baddies don't shoot back; they'll just crash into you. All too soon, you'll be entrenched in enemy fire.

Your ship can withstand a certain amount of damage, but take too much and the power of your weapons will

be affected. Once this happens, you'll need a power-up to get it back, or limp to the end of the level. Get shot constantly and you'll be blown from the skies.

Good luck. Some planet somewhere is depending on you. Probably.

or even to watch the Amiga have a go at itself.

You can adjust everything! Including the window sizes, the board will be resized to fit your needs.

Decide how much thinking time



Grand master or beginner, VChess can play you.

Disk AUI 52c

This disk will autoboot or the game can be played from Workbench by double clicking on its icon. If you play from Workbench, you may need to "show all files" from the Window menu to see the VChess drawer.

VChess3

VChess is a versatile chess game that allows you to play the Amiga, a friend

you'll allow the Amiga and start a game. The Amiga will show you all the moves it is considering if you want and there are also some famous games included for you to replay. There's also a teaching mode and the computer will solve for mate for you (handy!). The options are exhaustive and there's too many to be listed here.

VChess is a great game and very well developed. It is Shareware and you should register if you like it. The onus is on you.

Disk AUI 51c

Defender

OK, so strictly speaking this game should be dealt with together with the other SuperDisk. (Did you think we'd forgotten it?) However, since it's a game and not a utility, we've included it here. It is of interest to games players and programmers alike.

If you're a player, get shooting. If you're a programmer, do the same - you'll be interested to see how fast the new HeliOS language (see the Exclusive AUI review on page 28 of this issue) can handle graphics and gameplay. For details of the reprogrammable version and the language itself, see the review.

The game is a faithful clone of the classic. The rules are straightforward enough. You control a space ship, and your mission is to protect the humanoids below. Waves of aliens will attack, attempting to kidnap the humans. If they manage to lift one to the top of the screen, they'll mutate and you'll have a problem. If you see an alien with a human, shoot the alien (try and miss the human) and then catch the liberated bloke. Set him down and continue to destroy the enemy.

This game was to be released at £8, but it's yours here free. Because of its quality, it does require more than 1 Meg of RAM, at least 1 Meg of which must be Chip RAM. So, it's for expanded A500+ owners and up only.

A perfect Defender clone that's probably the fastest seen on the Amiga.



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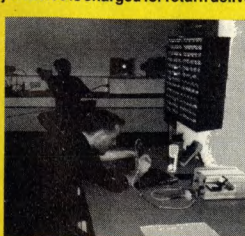
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Protracker 3	(PDA046) 1 disk £1.50
Persplex Hypnosis	(PDA037) 1 disk £1.50
Benchmark Tests	(PDA035) 1 disk £1.50
Tetrus AGA	(PDA043) 1 disk £1.50
Clipart Disk 6	(PDAC06) 1 disk £1.50
Clipart 10 pack	(PDAC25) 10 disk £12.50
CD ROM drivers (Ami)	(PDACD1) 1 disk £1.50
CD ROM Bonus Utils	(PDACD2) 1 disk £1.50
V-Morph	(PDA051) 1 disk £1.50
Kefrans Desert Dreams	(PDA012) 2 disk £2.25
Grapevine 17	(PDA009) 3 disk £2.75
Last Stand On Hoth	(PDA014) 4 disk £3.25
Motorola Invaders AGA	(PDA016) 2 disk £2.25
Fit Chix 2	(PDA034) 2 disk £2.25

UTILITIES

Directory Opus 4	£51.99
GP FAX 2.3 software	£49.99
Latest version of this Fast & Famous HD backup utility.	
Prima A600/1200 Hard Drive setup software. This is the best setup software on the market	£5.99
Xcopy Pro inc. hardware	£21.99

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Art Department Pro 2.5	£145.99
Art Department Scanner software	£114.99
Brilliance II paint and animation	£59.99
Deluxe Paint 4 AGA	£39.99
Make Path for Vista	£8.99
Mekon Magic	£24.99
Real 3D Classic	£77.99
Scenario Animator V4 (3Mb required)	£49.99
Terraform	£8.99
Video Creator for CD32	£31.99
Video Director	£115.99
Vista Pro 3 (4Mb required)	£29.99

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Pagesetter 3	£42.99
Protext 4.3 W/P	£39.99
Wordworth 2 AGA inc PrintMgr Special low price!	£34.99
Wordworth 3	£79.99

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... and now for something
completely CD Rom.
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Litil Devil

Gremlin's latest release for the CD32 - Litil Devil - is claimed to be (they would wouldn't they?) - a devil of a game! As an interactive cartoon, Divil offers five levels of underworld to explore with over 50 different puzzles

and quiet rooms to negotiate which are riddled with humour. With full cinematic score and wacky sound effects to boot! Price £29.99. Take a look at the review in last month's **AUI** for an appraisal without the PR hype.

Contact: Gremlin Interactive, Carver House, 2-4 Carver Street, Sheffield S1 4FS.

Tel: 0742 753423.

Internet at School

A number of interesting Internet projects are being carried on for schools by Koeksuster Publications. (Koeksuster? We'd better be careful how we spell that!). The projects include "The US War of Independence - Attitudes Across the Atlantic". Schools in London and Texas are exchanging questionnaires about who fired first at Concord.

Another project is Measuring the Distance to the Sun with a Metre-Rule. Schools in London, Greece and Latin America will be comparing the lengths of a shadow at midday. The Internet helps a rapid exchange of results.

There is one project that has schools educating ants - a London teacher shows how any school can collect and nurture ant colonies in the laboratory. And what about an Electronic Poetry Competition? Schools can exchange and even make multi-lingual creations on a one to one then one to many broadcast basis. Physics Limericks - for this project a recent textbook holds a rich crop of rhymes which help in learning concepts.

Practical Computing for Girls - now there's a patronising one for you. Research into how girls can be made to feel more welcome in the Internet. Well, we've heard that some girls take on male identities on the Internet so they don't stand out. And how can anyone tell the sex, or rather the gen-

der, of Internet users? Another more useful sounding project is "Skillware Projects". That's developing games with educational content. Who better to tell software programmers how to make educational programs more fun than kids at school who have to learn things they don't necessarily find turn-ons?

It shows what can be done with the ever-growing network. Will Gary Fenton be tuning into the girls' network for his On Line column? Can it be retitled to "What Turns Internet Girls onto **AUI's** Comms Columnist?"

Interplay Price Drop

Interplay, the authoring system written specifically for CDTV/CD32 title production has been reduced in price from £995.00 to £750.00. Optonica say this is a one off cost with unlimited disc distribution and no royalties.

Interplay is, according to Optonica, fast becoming the standard for professional reference title production including Pandora's CD, INSIGHT:Technology and INSIGHT: Dinosaurs from Optonica itself.

You might remember that Interplay has been used to produce cover CDs for **AUI**.

Optonica are currently working on Interplay II which should be available early this year. Version II, Optonica told **AUI**, will be a free upgrade to all Interplay owners and will



The popular interface comes down in price.

feature integral optimised ISO 9660 image building ready to cut a gold disk from any platform. It will have the previous 64 colour, low res page restriction removed to allow up to 256 colours in hires interlace, with overscan, motion icons and fully customisable buttons via new page animation features.

It will now come with ARexx support "for even the most demanding corporate and professional applications." Isn't 256 colours the maximum that the human eye can see at any one time? So you can be as colourfully demanding as you like, can't you?

Comply or else

PC makers have been required to comply with 6950 Compliance Europe standards by 1st January 1995 as the EC moves to stamp out suppliers of faulty and dangerous machines.

The regulations apply to all electrical goods and cover radiation emissions and electrical safety. Failure to comply may result in prosecution, not to mention possible electrocution. So remember to ask next time you buy anything to do with your Amiga if it complies with Eurostandards.

Bet you get blank looks from some of those dealers..

Pocket Fax/Modem

Pace, well-known for their modems, are bringing out what they claim is the lowest priced entry level pocket fax modem. They are pricing their new MobiFax 144 at £139.00, although the street price will probably come down to £100.00. At that price, the 144 modems are likely to appeal to both home users and businesses.

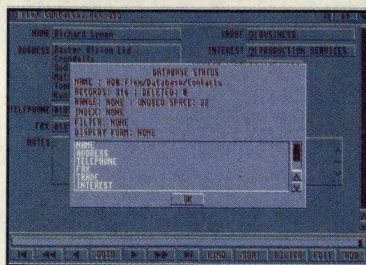
Matt Molloy, Pace's marketing manager told **AUI** "Just as everyone has a television and a video, so everyone will have a computer and a modem." That's probably going to come true. In which case if you have any spare cash, better buy shares in the phone companies.

Data Nexus Launched

Optonica has launched Data-Nexus. Data-Nexus, Optonica told AUI, is a low cost, high specification multimedia database, featuring multiple simultaneous access. (Yes, it does.)

It has fully configurable VCR style controls, find and filter controls, visual print layout mail-merge and label printing, on line calculator, special indices, with a database size limited only by the capacity of your hard disk, and that's just for starters. It has media fields, supports texts, pictures, animations, sounds, music and CDXL video, pop and roll menus and full online help. The cost? Just £29.95.

Optonica have also launched Info-Nexus, also priced at £29.95. This is, say Optonica, the first in the Nexus range of "low cost, high quality productivity tools



This rather average front end is the door to database power!

for Amigas." Info-Nexus is a file and data management system and Envoy networks are supported.

Contact: Optonica Ltd.,
1 The Terrace, High Street,
Lutterworth Leics. LE17 4BA.
Tel: 0455 558282.

P.Paint goes 6.1

Cloanto have told AUI that they are bringing out 6.1 of Personal Paint. Personal Paint, you'll no doubt remember, in its 2.0 version was a very popular AUI coverdisk last year and we gave the 6.0 version a very favourable review recently.

The newest version from the prolific Cloanto has, they told AUI, a more professional look, stereograms and more language code.

Version 5 was the first to offer animation. This was made five times faster for version 6.0 which included virtual memory, faster code, new image processing effects in addition to 24-bit printing, data types and improved GUI and HAM extensions of versions 1 to 4. Now we're up to 6.1. PPaint goes on getting better and better..

Contact: Ramiga International,
Stablaui 'Rin, Pentrefoelas,
Clywd LL24 OHT
Tel: 0690 770304

Star Cuts Costs

Star has introduced a family of three new 'plug 'n' print' dot matrix printers. They claim the colour version reduces the cost of colour printing to a tiny 0.5 pence per page.

The new 9-pin mono printer, the LC-90 has an RRP of £129.00, the 24-pin mono, the LC-240 is £149.00 and the 24-pin colour printer, the LC-240C at £169.00.

All three printers are said to have built-in automatic sheet feed-

Quotes of the Month

"If we make the machines too functionally rich, you're going to make the buying decision too complex." Vincent Smith IBM's marketing programming manager.

Now isn't that just too terrible.. You shouldn't put all you can into a computer because you might confuse the poor simpleton public. So give them the "easy" version to make their buying decisions less difficult. What about giving them every possible thing and letting them decide if they want it? Or is that too complex an idea for a marketing manager?



ers and low noise levels.

A tractor feed option is available for £15.00. There are drivers for Amigas too, you'll be glad to know...

Contact: Star Micronics,
Peregrine Business Park,
Gomm Road,
High Wycombe, Bucks.
HP13 7DL. Tel: 0494 471111.
We've managed to review one in this issue, see page 33.

Amiga Shareware

A new collection of Amiga Shareware, called, believe it or not, Volume 1 is now available from First Computer Centre and, as is suitable these days, it's on CD.

The CD contains all sorts of goodies including DTP outline fonts in Poststream, Wordworth, Pagesetter and ProPage formats; Clip-Art in bitmap and EPS format; MOD files, animations, and of course, games and virus killers. On the CD, the photographic quality images in 24bit, JPEG, HAM6 & HAM8 formats with some images that are claimed to be exclusive. There are commercial demos from Gremlin Graphics, Team 17, Chroma and Area 52. If you have a CD-ROM Drive, this collection, priced at £19.99 could well be worth taking a look at. Volume 2, AUI was told, will soon be released, featuring fully interactive technical support, "the definitive Amiga product guide" (Oh really? Does that mean there aren't going to be any more Amiga products after it comes out?) and new animations, 3D images and photographs.

Contact: First Computer on
0532 319444.

DEATH MASK

Death Mask, as featured on TV's Gamesmaster (Yes, there is still nationwide interest in the Amiga) is to be released for the Amiga and a special version for the CD32. The game features a multitude of evil aliens who are lurking around numerous corners in a vast maze of corridors and secret rooms. There is supposed to be a massive arsenal of heavy weap-

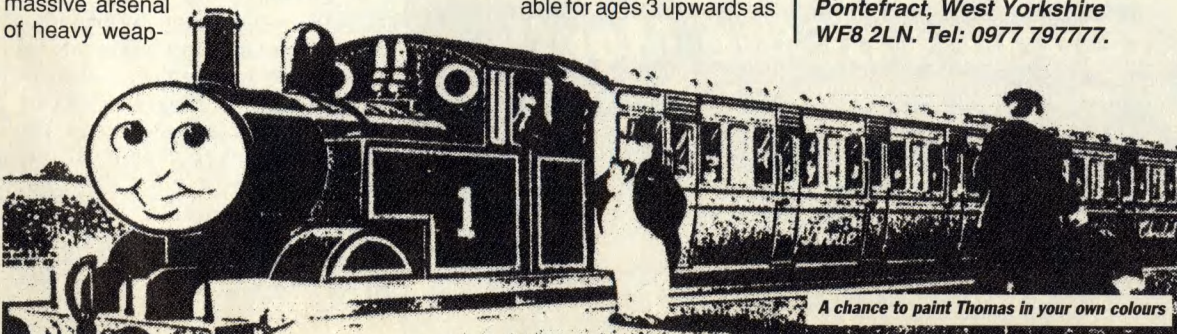
ons to blast away bad guys (and girls).

In addition to atmospheric sound and music, Death Mask has a simultaneous two player option in which you can play with or against a second player by hunting each other down through all levels.

Also from Alternative Software is Sooty's Electronic Paint box, suitable for ages 3 upwards as

a paint package for the Amiga. If you are into Sooty, you can colour in over 44 pre-drawn pictures or draw your own. For Thomas the Tank fans, (admit it you are one!) a TT Electronic Paintbox is also available. Wow! Price £14.99. See the review in this issue.

Contact: Alternative Software,
5-7 Baileygate Industrial Estate,
Pontefract, West Yorkshire
WF8 2LN. Tel: 0977 797777.

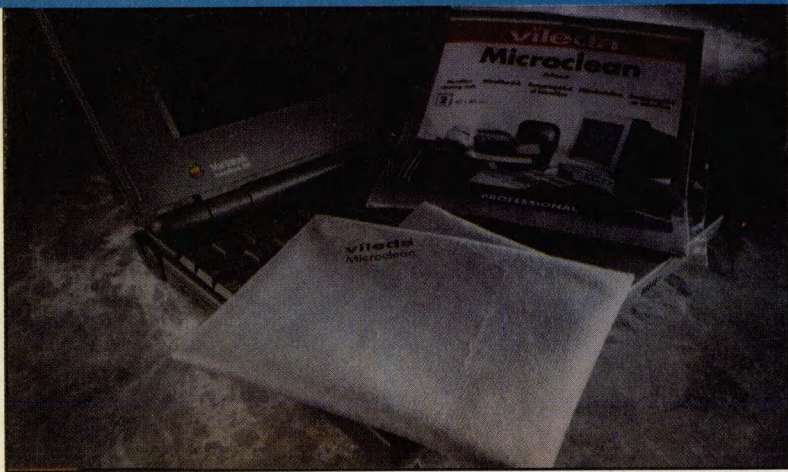


A chance to paint Thomas in your own colours

A Pentium Emplant

Blittersoft have told AUI that they have the latest version of the now legendary Emplant board. This one has the 586 IBM compatible version. That means, we would suppose, that it emulates the increasingly popular Intel Pentium chip. Why, oh why, we wonder isn't there any official announcement from anybody interested in taking over the Amiga that this board would be automatically a part of any high level Amiga? Won't they ever learn that if you can't beat them, you include them? Blittersoft have also told us that they are stocking the new Piccolo-SD64 graphics card, Picasso II, FolioWorX, PhotoWorX and the CD-32 emulator. A nice little range of the products that make the Amiga the superior machine that it is, don't you think?

Contact: Blittersoft, 40 Colley Hill,
Bradwell, Milton Keynes, Bucks
MK13 9DB. Tel: 01908 220196.



Wipe away those tears and smears on your screen.

Wipe that smirk off your face!

Vileda have told **AUI** that their high-tec Microclean cloth is the "safe, economical and easy way to clean VDU screens". In addition, this new microfibre cloth is "ideally suited to cleaning all types of delicate optical surfaces such as lenses, photographic equipment and photocopiers", according to Vileda. (Ah but will it clean the soup off my Tango tee shirt?)

Microclean can be used dry or as a damp wipe and is manufactured from the patented Belima X fibre - a combination of hydrophillic (water attracting) and oleophillic (oil attracting) polyimide fibres. (Now there are two words we bet you've never come across before.. hydrophillic and oleophillic. You see what you learn from reading **AUI**. Drop them into the conversation you have with the girlfriend..She'll be impressed...Well, possibly..)

Who Said The Amiga Was Dead?

16 of the top 20 of the most recent full price home computer games in the Gallup charts were Amiga titles.

Premier Manager from Gremlin was number one and only released so far on the Amiga. The fastest riser? Good old Anco's Kick Off 3. Anco, Gremlin, the Amiga..

Rumours of death are often these days greatly exaggerated.

Nerds With Attitude

Penguin have published a book which they believe will shatter the preconceptions about muscle bound heroes! (They say!)

"Hackers: Heroes of the Computer Revolution," claims that if hackers are nerds, they are "nerds with attitude."

This reminds us of the hat eating dog. His owner didn't like his attitude (hat-he-chewed - get it! Oh well, never mind.)

Priced £6.99 by Steven Levy (the book not the hat!). Amiga users can't be nerds anyway..

Virtual Desperation

Today's giants..tomorrow's pigmies? With the bottom falling out of the cartridge market, it isn't surprising that Nintendo are casting around for a new idea. What better than to get into "The Next Big Thing" - virtual reality, as many others are, as you can see from the special report on VR in this issue.

So Nintendo have announced their "VR32" - claimed to be a stand-alone, 32 bit portable VR unit playing interchangeable cartridges. (Yes, they don't seem to be able to forget them, do they?) And 32 bits... isn't that going to be a bit or two behind the times by the time it comes out?

They claim it's going to be launched at under \$200.00 - around £140 - in the US this spring. We'll believe a real VR unit at under £150 when we - virtually - see it.

Gates Opening Up

If you own the biggest software company in the world, you can afford to buy a few little luxuries. So Bill Gates, Microsoft boss and America's richest man, has picked up a nice little pressie for his new wife. He has bought nothing less than the notebook of that other software genius Leonardo da Vinci. The notebook is neatly written in backwards writing which old Len used as a form of code. Now code, that's something ace programmer Gates understands.

How much did Bily-boy pay? A mere £20 million or so..

Bill Gates' purchase of the DaVinci notebook has prompted the seriously interested-in-Bill brigade to muse why! Is it because he will pursue the intellectual property rights on the helicopter, parachute and siege machine, which are mentioned in the note-

book? Or perhaps he wants to see if he can run the renamed Chicago, now Windows 95, on the notebook? (No, it's not that kind of notebook, is it?)

About the only thing that Leonardo didn't dream of inventing was Windows but think what he could have done if he had had a real notebook computer!

Interestingly, though Gates is the top of the list of richest North Americans, he isn't in the list of the 200 highest paid business bosses there. Apparently he isn't generous to himself in salary only in the money he makes out of the shares of Microsoft.

And by the way, the long-awaited Windows follow-up, previously known as Chicago, is now officially called Windows 95, supposedly for the year it's to come out in.

Some people are saying that after the delays that the "95" bit might be optimistic and the real reason for the 95 might be the number of disks it will come on or the total megabytes necessary to run it. Or even the percentage of existing applications that won't run on it!

Quotes of the Month

"People are seeing what computers can do, particularly in the family environment, and deciding that this is the right time to buy. It's multimedia that has made the technology less intimidating". Packard Bell's Peter Bromage.

Obviously the reason that Packard Bell have risen to be the third biggest selling PC manufacturer in the world is that they don't believe that IBM's idea of not giving the customer loads of goodies because it makes the "buying decision too complex" is sensible. The public who have made Packard Bell successful - even Dixons have convinced their customers that Packard Bell machines are worth buying - are not fools, they see the way the computer market is going - into multimedia. It is estimated that there will be 43 million computers sold in Europe this year and some 70% of them will be equipped for multimedia. Next year 100%?

Twin Calibre

Since the launch of the US Gold offshoot Hit Squad five years ago, the company has built up a list of some of the top titles from Ocean, Virgin, Electronic Arts, Domark and Accolade et al. With the launch of "Twin Calibre", the Hit Squad has now entered the realm of CD ROM. Each of the new Twin Calibre releases has two playable CD "premium" titles for £19.99. Sounds like pretty good value.

Contact: The Hit Squad
Tel: 061 832 6633.

No More Suicide

Kuma Books have released Lemmings: The Solutions for the Amiga. Written by Steven Croft and Antony Lyell, the book is a step-by-step guide along the paths where few

Lemmings have gone before and returned.

If you are stuck on a particular level, can't get the last few home, or haven't managed to rescue even one little Lemming, the book covers all of the single player levels of Lemmings, Oh-No! More Lemmings and Lemmings 2 - the Tribes. And we thought after Oh No More Lemmings that would be the end of this self-destructive saga. Will we never escape these suicidal midgets?

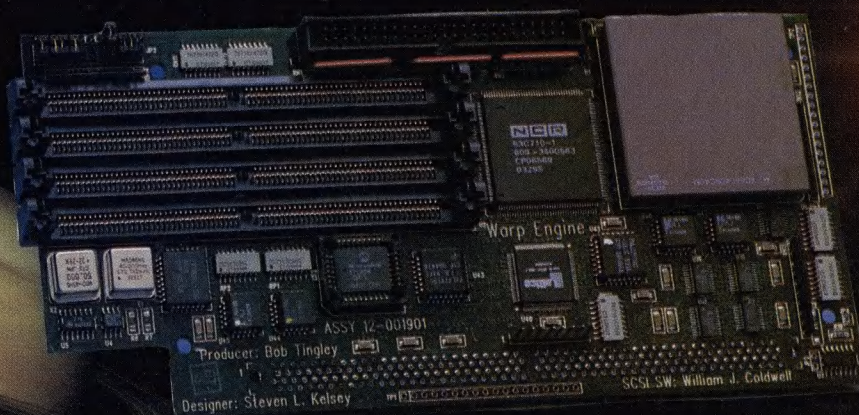
Price £9.95
Contact: Kuma Books Ltd.,
12 Horseshoe Park, Pangbourne,
Berks RG8 7JW.
Tel: 0734 844335.

Quotes of the Month

Ted Leonsis of America Online said "Tell Bill Gates that interactive services will become Microsoft's Vietnam".

With Microsoft announcing that it is getting into the global networking world with a product called 'Marvel', it's not surprising that those, obviously smaller, companies already in the business are starting to get nervous. However, no-one has yet made any real money out of on-line services in spite of the much-hyped information superehighway concept. So maybe, just maybe, this will be Gates' bridge too far... or was that in a different war?

WARP ENGINE



Complete Acceleration Solutions for the Amiga A4000 and A3000 Systems. The WarpEngine™ provides the Highest Speed 040 Acceleration available with up to 128 Megabytes of Local 040 Burst Memory™ and the Fastest SCSI-2 HardDrive Controller Available! All of this WITHOUT using a single Zorro III Slot!

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2 minutes, 40 seconds

A4000Warp-40MHz

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A4000Warp-28MHz

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Diskspeed using 2.1Gig Barracuda Drive: Read from file 9 Mbytes/sec

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Features	WarpEngine	GVP-040/40	X-Calibur	FastLane	4091	DKB3128
28MHz, 33MHz, 40MHz Versions	YES	NO	NO	NO	NO	NO
28MHz Upgradable to 33 or 40MHz	YES	NO	NO	NO	NO	NO
Expandable onboard to 128Megabytes	YES	NO	YES	YES	NO	YES
Built in SCSI-2 Fast Hard Disk Controller	YES	NO	NO	YES	YES	NO
Uses Industry Standard Amiga SIMM Modules	YES	NO	YES	NO	NO	YES
Uses any Combination of SIMMs	YES	NO	NO	NO	NO	YES
Allows use of the Memory from the Amiga	YES	NO	YES	NO	NO	YES
Uses a Zorro III slot	NO	NO	NO	YES	YES	YES
Memory Speed Much Faster than Amiga Ram	YES	YES	YES	NO	NO	NO
Works in Amiga 3000	YES	YES?	NO	NO	NO	Yes
Zorro III DMA or Buster Problems	NO	NO	NO	NO?	YES	?

*The speed of Ram installed on a Zorro III Memory board is about 30 to 40% slower than the Ram on the motherboard. *GVP uses custom memory modules that can cost up to 1.5 times as much as the standard memory used on WarpEngine. This memory can only be used on a GVP accel. Bd. *The X-Calibur requires you to install 2 SIMMs at a time. *The FastLane uses old 8Bit memory modules that must be installed 4 at a time.

MacroSystem Development, Inc.

24282 Lynwood, Suite 201 • Novi, MI 48375 • Phone (810) 347-3332 • Fax (810) 347-6643

Microplay Part Exchanges

Microplay, a store which sells and rents new games plus part exchanges old games, launched their first UK outlet recently at 154 Stratford Road, Shirley near Birmingham.

Microplay has nearly 130 stores across North America and expects the Shirley store (Shurley not?) to be one of 15 stores to be opened in the UK in the next 12 months. The idea of renting

and part exchanging games has proved popular, particularly as Microplay are offering to part exchange games not purchased from Microplay.

Now that seems like a good idea, to be able to take back all those old games and get new ones in part exchange. But somehow the new ones don't seem to thrill as the old ones did. Are we getting old?



Slim and cool. All it needs now is a sun-roof

Robotics V34 Price Cuts

Following the launch of the budget priced Sportster 28,800 fax and data modem at £299.00, U.S. Robotics has brought down the price of the Courier V.34 corporate desk top modem from £499.00 to £399.00. which we recently reviewed. Managing Director Clive Hudson told AUI that they have standardised V.34 for corporate users while still expecting V.32 to command 'healthy volumes' in the SOHO market.

Existing users of Courier V. Fast Class product from May 1994 will able to take advantage of a free flash ROM upgrade offer by dialling into the US Robotics bulletin board and downloading the appropriate software.

Contact: U.S. Robotics Ltd., 224 Berwick Ave., Slough, Berkshire SL1 4QT. Tel: 0753 811180.

Kicking up a Cyberstorm

We're told that The Advanced Systems and Software CyberStorm 68060 accelerator for the A4000 advances the standard 25MHz, 19 mips (millions of instructions per second) to about 40 mips. With the 50MHz CyberStorm fitted the floating point operations per second jump from about 5mflops to almost 30 mflops. 38 megflops? We're talking some real speed stuff here..

Some practical tests that have been done with ADPro are interesting. Scaling a 1.6 Mb 24-bit graphic by 50% takes about seven seconds on a standard A4000/040 but less than two seconds with the 68060 CyberStorm fitted. "A convolution blur" - a what? - on the same 1.6Mb graphic that takes 1 minute 17 seconds on the standard A4000/

040 takes just 24 seconds on the 68060 CyberStorm. (A convolution blur? Is that a reference to the grammar of AUI's NewsFile? In which case, we resemble that!)

The supplied figures, they tell us, will get even faster when the MMU software for the 68060 is finished as the copyback cache can then be switched on.

DKB will be releasing a 68060 accelerator in competition with this AS&S CyberStorm supposedly early in the new year.

For a view on what the DKB 68060 will do and a possible explanation of what a convolution blur is try contacting Ramiga International at their hideaway in *Stablau 'Rin, Pentrefelas, Cilywd. Tel: 0690 770304*

Green Technology Cuts Costs

Every day huge numbers of spent ink, ribbon and toner cartridges are thrown away. They're nearly all made from high-energy, non-biodegradable stuff. But this waste material is really made of finely engineered re-usable components. In the last decade, it's estimated that over 250 million print cartridges have been dumped in landfill sites. Now a Guernsey based company has a solution for anyone who uses office and computer printer consumables. Ribbon Revival have a system which, they say, can successfully recycle almost all ribbons, cartridges or even ink pads. Apart from environmental benefits, their system can, they claim, save the user 30% - 70% of the replacement costs. It's an environmentally recom-mendable idea. **Contact: Ribbon Revival Ltd., Caslon Court, Pitronniere Road, St. Peter Port, Guernsey, Channel Islands GY1 2RW. Tel: 0481 729552.**

8 Players In Panic Mode?

MicroMachines, a game that's been around for quite some time, has come out on the Sega Megadrive.

MicroMachines 2 Turbo Tournament is claimed to be the "first simultaneous 8-player game where manic multiplayer in Party mode can race sharing four joypads."

Can you imagine that? Eight players all have a go at the same time! Do not invite us to that particular "party mode" thank you.

We have always thought that anyone buying a Sega Megdrive was barmy - especially to pay the extra for the CD bit, when the Amiga CD 32 is much better value - but after going into "manic multipay" sorry, multiplayer, if they weren't bonkers to begin with they will be pretty damned quick.

Radio to Phone to Fax

They took a trip on BR to pose this photo - desperate!



Quotes of the Month

Alan Dickinson, Nintendo UK MD, on the Gameboy: "Its age doesn't seem to matter. In fact, it's in danger of becoming a modern icon, and that doesn't often happen in the electronics industry. It's a classic product, that hasn't changed for years but is still popular - just like original Ray Bans".

Have "the original Ray Bans" become a modern icon? We thought they were just for posers before the portable phone came along. But the Gameboy - that male chavinistic title and all - did certainly open up the market to a very much younger age group than most of the home computers were aimed at. Whether it has done that age group much good is another matter. Perhaps the Nintendo MD might consider the effect of the awful Gameboy instead of boasting about it becoming an icon. Or are we just naturally iconoclastic?

Vodafone has launched a radio network for PCs hooked up to mobile phones which it says will provide data transmission at up to four times the speed of current radio PCMCIA fax/modem cards. With other companies such as Orange and Mercury hard on their heels, the Vodafone GSM service is claimed to be the first.

The digital GSM (global system for mobile) communications service transmits at up to 9,600bps compared to the 2,400bps which analysts say is the fastest reliable speed for existing wireless PCMCIA devices. Users can connect a digital Vodafone to their notebook or PC via a PCMCIA card. The phone transmits to the radio network which uses a public telephone system to complete the link to the computer equipped with a dial-up modem.

What a great idea, will it work on PCMCIA cards for the Amiga? No-one seems to know but let's hope it will.

Upgraded PC Emulator

PC Task 3, claims to be the only software 80286 emulator for the Amiga and retails at £79.95. New features in the most recent release include: compatibility with Microsoft Windows TM 3.0 - 3.11; switchable 8086/80286 emulation; support for 16Mb RAM (15 Mb extended). It also supports hard disk files and hard disk

partitions. PC Task requires Amigas with OS 1.2 or greater and minimum 512k RAM. Upgrades from PC Task V3.0 from full versions of PC Task 2.0 are available for £34.95.

Contact: Meridian Software Distribution Ltd., East House, East Road, London SW19 1AR. Tel: 081 543 3500.

Mastering Scripts

The latest in the Bruce Smith Mastering AmigaDOS series is a collection of over 100 script programs, claimed to be for beginners and expert. The beginner can use the off the shelf programs which are said to "useful and usable" and which are good examples of script programming.

The experts can learn from the fully documented listings and can pick up advanced AmigaDOS programming techniques which can be used in their own programs.

The script programs vary in size and complexity but are presented in a consistent fashion throughout the book. An accompanying disk containing the original programs is available free on presentation of a form which is in the book, written by Mark Smiddy, priced at £19.95.

Contact Bruce Smith Books Ltd., 106 Smug Oak Centre, Lye Lane, Bricket Wood, Herts AL2 3UG. Tel: 01923 894355.

Let's Get Innovative

The Information Technology Programme of the European Commission in conjunction with the European Council of Applied Sciences and Engineering, has launched a competition to select Europe's most innovative IT products. The winners will be the three entries considered the most innovative products with high IT content and evident market potential. Entries should have reached the prototype stage but should not have been on the market longer than six months. The twenty finalists will each receive Ecu 5,000 (£4000). If you have a great idea, as far as we are concerned preferably involving the Amiga,

Contact: The ITEA/Euro-Case Secretariat, France.

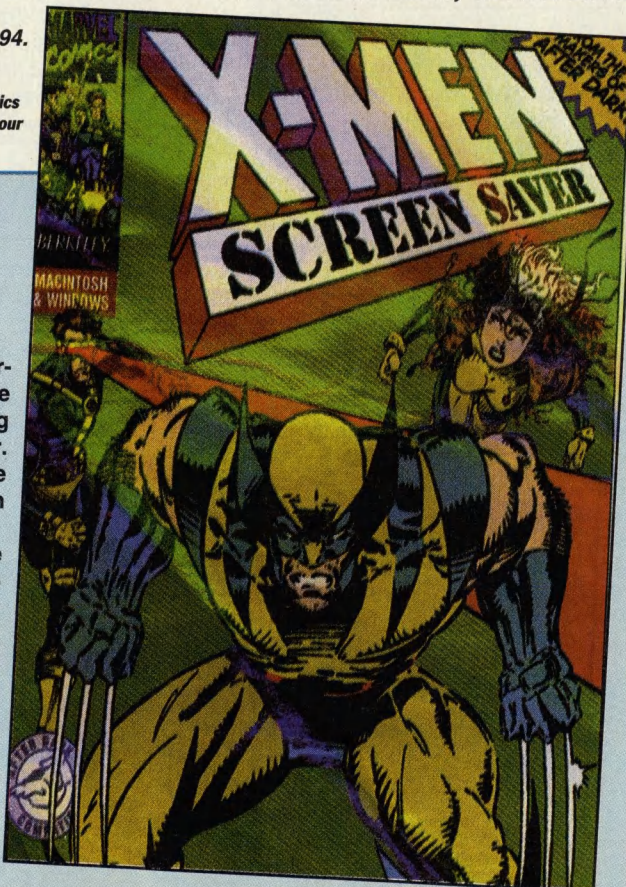
Telephone: 331 44 41 43 94.

Marvel at the antics of the X-Men on your screen.

Teenage Mutant Screen Saver

Berkeley Systems have announced that Superheroes, super-villains and mutants may be fighting their way across your screen following their launch of Marvel Comics' X-Men Screen Saver. Wow! The company has also launched the Simpsons screen saver. I'll eat my shorts if screen savers aren't big business.

Berkeley have built their business on those pictures that pop up when your screen wants to do nothing but go blank. They have recently announced profits of around £10 million. Not bad for producing something that disappears when you use your machine. But they must think that the writing is on the wall, or rather the screen, because they are also talking about reducing their dependence on screen savers and developing some other kind of software. Any suggestions for another really peculiar idea? Can you imagine the disbelief from their bank manager when they started producing flying toasters?



There were a few Stylophone cases left over Rolf... mind if we use them?

Hayes (see next story) may be going down but US Robotics is coming up. They have launched a V.34 version of their budget priced Sportster fax modem at £299.00 offering 28,800bps uncompressed data transmission over dial-up lines.

The Sportster 28,800 is aimed mainly at remote workers dialling into E-mail or groupware systems and high volume Internet users and complemented the recently launched Courier

V.34 corporate desktop modem.

As well as V.34 data communication, the Sportster 28,800 includes send and receive high speed fax at 14,400bps.

Hayes Goes Down Or Up

Hayes Microcomputer Products, the modem company who set the standard for the communications world, has filed for a Chapter 11 reorganisation - which gives it temporary protection from creditors under US law - a bit like what has been happening for Commodore.

The company claims that its application doesn't mean its going bust but merely is a way of overcoming "an unexpected cash-shortage" caused by 'dramatic increases in demand' for its products. 'Cash shortage', isn't that what we all have?

Dennis Hayes, the company's founder, said that Hayes' business was actually at an all time high, and promised that there would be no immediate interruption to production and that delivery schedules and commitments would be met.

That's the trouble with doing too much business, isn't it? You can't pay your creditors...

But it is sad that the company that became for the modem world what Hoover is to the vacuum cleaner should hit trouble just as the computer-comms industry really seems to be taking off. Back in the days when modems were for the privileged few, a Hayes modem was the thing to aspire to. But then who buys Hoover vacuum cleaners these days?

Better Than Ever

Rumours that copies of Microsoft's Word 6.0 was recalled have proved unfounded. It wasn't recalled. News has reached AUI that Microsoft simply sat back and waited for customers to discover the mistakes in the disk for themselves. That's one way to solve a problem, isn't it?

One poor user who was upgrading all his Microsoft Office applications not only received the dysfunctional Word but was sent version 4 of Excel as an upgrade to Version 5 and Access 1 to update Access 2.

There may be no doubt any more that technology has made great contributions to the efficiency of the human race. The only trouble seems to be that no-one has yet discovered what they are.

TOUCHING UP MIGRAPH

GoldenImage are releasing a *Migraph Touch-Up upgrade v4.0* for the Amiga. The new features include: *Merging* - this allows you to scan or load in two images and then merge them and it will take scanned in A4 sized or even larger images. The new version also has *Image Scrolling* which will automatically scroll the image when you move the cursor to the edge of the screen. Another agreeable sounding idea, especially for those who are nuts about keeping the house tidy, is *Automated Clean-Up*. This was developed, say GoldenImage, specifically for a professional image editing studio to save time in post-image editing.

The new version is priced at £35.00 a price low enough for GoldenImage to make a clean up too. **Contact: GoldenImage, 65 Hallmark Trading Estate, Fourth Way, Wembley, Middlesex HA9 0LB. Tel: 0181 900 9291.**

BOGUS AMIGADOS 3.1

Expert Services is distributing AmigaDOS 3.1 for all Amigas under contract with Commodore Germany. (We thought they'd gone bust.) But it seems that although none has been officially shipped yet, bogus copies of 3.1 are being offered already. It appears that the pirated versions include 6 disks with plain white labels with black text and the necessary Eproms. No manuals or box are included.

The official licenced version from Expert includes a box with printed sleeve detailing 3.1 enhancements, 6 disks with professional coloured Commodore logos and 3 manuals covering Arexx, Workbench 3.1 and DOS 3.1. If you have received a version that does not seem official please call Expert Services on 606 371 9690.

What Price

Recycling?

The EC's efforts to prevent Europe disappearing under a mountain of digital debris could raise electronic and electrical equipment prices by as much as 15% says the European Association of Consumer Electronics Manufacturers. (Well, they would, wouldn't they?).

Although computer manufacturers who currently practice recycling break even, they are worried that increased scrap volumes will reduce prices and make recycling a losing business. Somebody always complains, don't they?

NEXUS PRO

The humbly named VideoWorld has told AUI that their new Nexus Pro Reference library CD-ROM has been let out of the cage.. Sorry, "officially released". Aimed at video and multimedia enthusiasts, the CD-Rom contains a multitude of backgrounds, fonts and sounds and costs £54.99.

We're told the contents include 300 - 24bit background pictures; 300 - 256 colour pictures (IFF GIF); 470 - compugraphic scalable fonts; 80 - 16 bit sound effect samples/music loops; the original Nexus Pro range (150 pictures JPEG and 256 IFF) and various PD utilities including graphics conversions programs and start up utilities. Whew! That sounds more than enough to get on with for the moment, doesn't it?

The CD-Rom is intended for Amiga users using paint, presentation and desktop publishing software such as Brilliance, ScalaMM, Mediapoint, Final Writer 2 etc.

Contact: VideoWorld, 8 Ardoch Gardens, Glasgow G72 8HB Tel: 041 641 1142.

GOLDEN IMAGE IS MOVING



There must be a million uses of this vibrating knobbly foot pad.



Ancient Chinese acupuncture has been merged with naff nineties technology.

Not only are Golden image moving to larger premises, but they have also "moved their product range to meet the needs of all computer users." Oh really?

One of their latest products is the adjustable foot rest with built in massage - yes, massage not message which would make it even more interesting. It provides leg and back support, "especially for short employees." (Here you are Mr Shortarse, try this adjustable foot rest. And stop playing that Randy Newman song.)

The surface treadbumps help massage tired feet and "improve blood circulation to the leg." (Which leg? We'd rather have a massage from a sexy masseuse who advertises in the phone boxes Mark Blackham is always hanging around in.)

To relieve eye strain the Eye Massager "helps relieve the tension and tiredness." (We swear this is not some kind of a joke.) "Based on the acupuncture points of the eyes, the rubbing and pressing action stimulate the nerves of the eyes." (Just keep it out of our eyes please, they're getting bad enough from too much monitor staring anyway.)

Other products definitely deserving of a golden image are: Wrist pads, Anti Radiation screens and mice and trackballs.

For these and plenty more exotic goodies, **Contact: Golden Image, 65 Hallmark Trading Estate, Fourth Way, Wembley, Middlesex HA9 0LB. Tel: 0181 900 9291.**

DEMANDING ATTENTION

On Demand Information Plc., an interestingly named company, have released their recent financial results, which make for some odd reading. "What do 'On Demand' do?" We hear you cry. Well, they shoot information down the line to such places as doctors' surgeries where the suffering patients are waiting to be told that the NHS can't afford to treat them.

On Demand supply TV style monitors that bombard this unhealthy captive audience with "narrowcast" programmes. You will no doubt find it reassuring that On Demand say their service is "endorsed by" the Government's Central Office of Information (equivalent to Orwell's Ministry of Truth in "1984"?). Propaganda channel? What do you mean "propaganda"? This is all about the information superhighway and how the Government loves us.

Besides increasing their staff from 97 to 197, On Demand's turnover is up 75% compared to last year. Another main area where they are becoming active is in training where they are supplying a package called "Advantage" which they claim will make video etc seem expensive and inefficient.

They also have a project going with the Employment Services Agency testing ways of eliminating paperwork through on-line services. So instead of getting rid of wastefully having millions on the dole, the Government is employing companies like this to go 'electronic' with the paperwork.

One consolation for anyone who believes in poetic justice is that when On Demand floated on the Stock Exchange recently they raised some cash, a chunk of which they stashed away in apparently very safe British Government stocks. Those stocks promptly took a nosedive and On Demand lost nearly half a million pounds. They're suing the advisor who told them that investing in the Government was a sure thing. Oh yes, and On Demand have proudly announced that their losses have increased from about £1.2 million to £2.6 million. Perhaps there is a moral to this electronics fable somewhere... Maybe we should ask On Demand to send it down the line...

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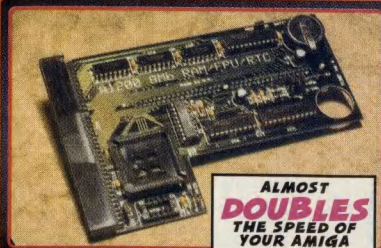
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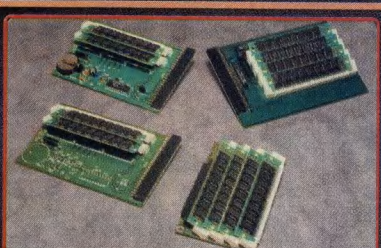
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Thinner ... Faster ... Cheaper ...

Intel are pushing their Pentium chip out in no uncertain fashion to stymie the growth of the competition who are producing ever greater numbers of the lower grade 486 style chips. Intel are predicting that very shortly some 25% of all PCs with "Intel Inside" will be Pentium-based.

They are planning to help this along by 'thinning the chip' by 50% to

get the speed of Pentiums up to 150MHz. Moving the chip production to 0.4 microns from 0.6 microns not only gives the higher clock-speed, it also brings the size right down to 486 size and produces more from the same amount of silicon.

It's being forecast that the P6, the next generation up from the Pentium, expected to emerge in Au-

turn, will perform about twice as fast as the current top-end 100MHz Pentium. Ever onward, ever upward, ever faster, ever cheaper and get in your retaliation first, seems to be Intel's motto - and it's not so bad an idea at that. If you can afford to spend about £12 billion on development of a chip that is, which is the estimated cost for the P6..

Intel's Vision

Claude Leglise, multimedia director at Intel, has predicted a future when PCs will contain little more than one chip and a storage device - "a trivial amount of hardware, a CPU and a hard disk... Where we are heading for is native signal processing", he said while describing software that would let the CPU complete communications and multimedia tasks such as video capture, with the help from at most only dumb cards.

"Our perception is to have a series of add-in cards with essentially no intelligence", Leglise said, saying that moving the biggest part of the work from the card to the CPU would significantly reduce the price of the cards. The process would start next year, beginning with sound cards and might move on to video capture after that. Video cards priced at £400.00 now would be reduced to simple converters costing around £50.00, he predicted.

We suppose that Intel must be planning the next generation, after the next generation P6, to be very complex CPU's indeed, able to take on loads of tasks that it currently cannot handle. One of the main advantages the Amiga has always been the custom chips that have given it such power. Will that whole idea disappear in the future? If it is to happen then the CPUs are going to have to increase massively, in power if not in size, to allow just the addition of "dumb" cards to equal the advantages of custom chips and that could take a lot of time, a lot of cash too. We'd bet it won't be in this century even for Intel.

And as for your rotten show...

Independent TV producer Hewland International, Channel 4 and Teletext have joined up to run a live Internet link to Teletext for C4's computer games show GamesMaster. The link appears on Teletext as subtitles with comments, criticisms and jokes from viewers about the show. Viewers can also comment during the ad breaks on the ads and trailers shown.

Oh the temptations that are being offered... If like us you sit and comment how stupid and patronising most of the ads on TV are. We'd almost be tempted to watch the egregious GamesMaster show again just for the pleasure of telling them what we think not only about the ads but about the show too. But we doubt they'd ever let the public see our language..

Coombe Valley Make It Fun

Coombe Valley Software is run by two teachers who, they say, couldn't find suitable and reasonably priced educational software for their own children.

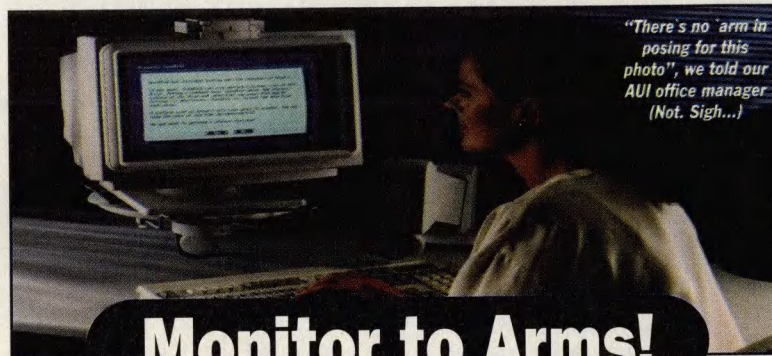
They told AUI that the games they have created have a strong educational content but are packed with illustrated text adventures to encourage children to read and think about what they are doing instead of just relying on quick reflexes. All the ad-



Mein freund lernen Deutsch in der AUI buro.

ventures, they say, help develop reading, keyboard skills, logical thought and planning. The games are priced at £16.00 (boxed) or £14.00 in a plastic wallet. In addition to their own products, Coombe Valley distribute a budget range of educational software from Rainbow Educational and Audio Gallery language courses from Fairbrothers (see the review in this issue.) If you would like a copy of their catalogue contact:

Coombe Valley Software,
51 Coombe Vale Road,
Teignmouth, Devon. TQ14 9ER.
Tel: 0626 779695.



Monitor to Arms!

Accodata has launched a new range of monitor arms designed, they say, to provide extra desk space, increase workstation flexibility and improve viewing angles and possibly to hold you up when you fall from exhaustion after hours at your Amiga.

Swing Arm allows both the arm and monitor platform to rotate through 360 degrees. (Spinning out time?)

"The flexibility allows the monitor to be used by a number of operators" (Surely not all at the same time?)

and removes the problems of trailing cables by managing them inside the arm. It also comes equipped with a non-reflective retractable keyboard tray. (We've always longed for one of those.) Swing Arm II is similar in design but provides "a fully adjustable platform featuring four non-slip plates" which can be set for any monitor base between 270mm to 370 degrees. Non-slip plates? Are they to stop you spilling your spaghetti bolognese over the keyboard?

Recycled Amigas?

You might have heard a story recently about Commodore, when they were manufacturing computers before their unhappy recent history, selling second hand machines as new.

As usual the truth is a bit more complicated than the Press reports would make out. As everyone knows, not all new computers function absolutely perfectly. (Is that really a surprise to you?). CBM reasonably say that when a machine is sent back with some fault, and has been replaced, which these days is more common than being repaired, they don't just dump the thing in the trashcan. Plenty, even virtually all, of the computer might work perfectly well, so those parts can often be cannibalised and used again. Seems like a sensible idea when the world is full of useless wasted energy.

Commodore have said that they've never made any secret of this and that the refurbishment program is part of the worldwide company policy. In fact, one former director said that if the Com-

pany had been forced to scrap machines totally whenever they took one back, Commodore would have gone bust long ago. CBM deny they are selling second hand products, although according to the Trading Standards Authority, if such stock were sold as new it constitutes a false trade description.

However, it seems that all computer companies may well follow the same procedure, though they tend to keep it quiet.

Still it's an odd business, because these days so much of modern machinery does not comprise of anything that moves. There is no friction to cause wear, yet so much of it is interdependent electronics that one tiny circuit can throw the whole thing out of sync. So what should happen, should a whole Amiga be junked if one part has failed? Or should we use the globe's resources with a little more caution than filling every dustbin with unnecessary throw-away stuff like packaging and - almost - new computers? It's your choice...

Beware Barney!

While Compaq announces plans to get into consumer electronics, and promotes its computers, equipped with answer phones and modems, some people might be worried at the possible lasting psychological damage caused by the company's other products.

The far out company plans to sell "The robotic offspring of Barney the Dinosaur, with purple feet, chubby belly, big ears and a flat round cap on its head, which Compaq engineers have dubbed "Mr. PC Head" according to the Wall Street Journal. Would you want to expose your family to such an animal? Could the inventors of such nasties be anything but under the influence of some peculiar substance, perhaps too much silicon?

Compaq's apparent plans to move into the home electronics market with the development of computer-based machines which "may replace videogame players, stereos and possibly even the television" are based on the company's 5 kilo portable computer, stereo, telephone and television set and possibly even dropsided cot for children.

A version for teenagers (waterbed based?) is also in development and would cost around \$600.00. (Condoms extra and optional). But we hope that such terrible beings will not be a part of the plans to invade innocent computer users homes and corrupt their children away from video games and TV. We don't want any part of this kind of future, do we? (Do you?)

Which Channel?

Intel have announced that its technology for letting users watch television on their PCs "is ready for prime time". Although there are no plans to bring this to the UK yet, the ability to get incoming live digital video over the network is "more practical than wiring a whole building for users to receive cable". The technology developed with Cable News Network and called CNN at Work is a subscription-based service that delivers Headline News or CNN broadcasts over PC networks. The software allows users to view, index and file digital video clips as well as broadcast live or stored video messages to other workstations, according to Intel.

But just a minute.. isn't CNN a cable station and so won't the place need cabling to receive the data?? Is Intel just trying to confuse us simple computer users? And succeeding?

Quotes of the Month

According to a New York financial analyst "These guys seem like a flakey bunch of prima donnas here in Manhattan. Over in Toyko they must seem completely crazy".

He was referring to the recently revealed disastrous loss by Sony of something not far short of a couple of billion pounds on the Hollywood film studios they bought at the end of the Eighties. It seems that the money mad "businessmen" who ran the studios, including one Jon Peters, erstwhile hairdresser to and then live-in lover, of Barbra Streisand, don't quite fit in with the more modest style of the Japanese electronics companies.

"A flakey bunch of prima donnas"... could that, in a few years time, be the description applied to the games development companies that are today being snapped up by bigger companies in the fashionable, some might say Gadarene, rush to get into the electronic entertainment industry?

You'll be having a heatwave

Heatwave Multimedia have released three "18" rated games titles on video CD so you can play it on your CD32. Summer Games - up against some hot competition, One In a Million - will he spend it all soon? and Quantam Deep - Time Travel as never before. From the pictures we've seen though this may be the wrong season these summer games will certainly keep you warm during the Winter. Who said the CD 32 was only for kids?

Contact: Heatwave Multimedia Ltd., PO Box 266, Tunbridge Wells Kent TN2 3ZW. Tel: 0892 523224.



It's hot in the studio and she's trying to maintain her self-respect. OK?

Do you really want to go there today?

Microsoft's \$100 million - £60 million - advertising campaign aimed at consumers is part of a "three-phase brand awareness campaign." "Where do You Want to Go Today" started in the UK in November and will last for seven to eight months. For plenty of people, us among them, the whole ad idea seems totally incomprehensible and is probably a result of some clever dick ad agency trying to avoid mentioning computers when its client wants just to sell them.

Doubling what Microsoft currently spends on advertising, the ad is featured in a 30 or 60 second TV commercial in which has a series of grainy images in both colour and black and white of people and places worldwide. Occasionally a PC screen passes into view. Wow! Look there goes a computer! The theme is supposed to be that software, from games to business applications opens up all kinds of possibilities for individual users. Oh

really? What an original idea! Whoever would of thought it! And that's worth £60 million? Well, no doubt Bill Gates can afford it.

The Benefits of Technology

Elvis spotters who have to travel to Las Vegas to see the impersonators can now get a glimpse of the King on CD-Rom courtesy of Discworth, a UK based company.

The disc comes with an Elvis Presley biography in five languages and 23 songs, by an Elvis lookalike, with a sing-along guide!

Can we have any doubt that technological progress is really worthwhile when it is used for such valuable purposes as this?

... and now for something completely CD Rom.

Fans of Monty Python will be able to use technology to join in with the dead, late, deceased, kicked the bucket, nailed to the perch parrot or Ministry of Silly Walks in the latest interactive CD-ROM to hit your serious world of computing.

As well as celebrating the launch of NFT's Python Periphery series on CD, there is a decidedly silly range of Python merchandise to complement the electronic experience of the demented games and exploding rooms.

You can even buy a Monty Python screen saver called, rationally enough, "A Complete Waste of Time".

Agreeing To Disagree

The PowerPC trio, IBM, Apple and Motorola has become an alliance with plans for a common hardware platform sharing PC and Mac components for the first time but it still can't agree on an operating system.

Still awaited, as shared hardware is not enough and with systems not available until 1996, is a common software environment.

That is not planned at the present as Apple and IBM continue to pursue separate operating system development.

It seems they are relying on OpenDoc, which is aimed at creating cross platform object orientated "middleware" - now there's a new term for you - which, they hope, will allow integration of applications written for any OpenDoc-compliant operating system. Oh really?

David Levy, Power Mac product manager for the UK said that there were a number of reasons why the partner companies were unable to reach an agreed position any earlier.

You can bet there are and one of them is Apple's fear of being swallowed up. For if you can run any software on any system which do you think will be the more successful - IBM-compatible or Apple?

Yet again a common system is failing to emerge and a result of this might well be that the PowerPC may lose ground to other RISC developments. Will they never learn?

Get Moving

Creating animations with 8 bit pictures is no problem on the Amiga. You can use paint programs like "Brilliance", "Deluxe Paint", or the inexpensive and excellent "Personal Paint" to combine single pictures into an animation. 24 bit pictures, however, are a totally different matter. They are colourful, they are realistic, they are popular, ... and they are big. So big, in fact, that it's very hard to get them moving, especially at a reasonable speed.

Main Actor allows you to create animations up to 24 bit, edit and convert them and last but not least play them back. What makes the program so special is its excellent support of several graphics cards and the multitude of picture and animation formats it can load and save (see box).

Like "Art Department Professional", MainActor uses loader and saver modules that reside in special drawers. You can manually choose the loader module, but normally you simply use the universal module and leave it to MainActor to find out the format of a file and to choose the appropriate module.

Editing

Creating animations couldn't be simpler. Just select the first and the last picture of the sequence in a file requester. Then choose the output format and save the animation. That's all. Well, not really. Obviously you have to wait some time while MainActor examines the differences between consecutive pictures and creates the animation based on this information. Even on a fast Amiga, this can take several minutes for an average sized animation. You can assign a time code to each frame and thus determine the playback speed for each picture

MainActor Professional is a modular animation package from Germany. Hartmut Schumacher test drives it.

individually. MainActor is able to hold up to five animations in the memory simultaneously (see picture 1). So it's very easy to append frames from one animation to another. But unfortunately it is not possible to delete, move or duplicate a frame within an animation. This disappointing and surprising omission is my main criticism of the program.

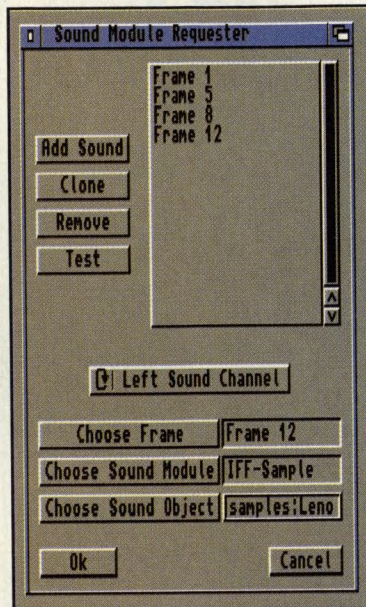
Sound

But MainActor is not only good to your eyes, it also pampers your ears. To each frame of the animation you can attach an IFF 8SVX sound (that is a normal Amiga sound sample to you and me). At the moment the program supports mono sounds only, but at least you can decide if the sample should be heard on the left or right or on both sound channels

It's easy to get carried away and create an animation that is too large for your Amiga's memory (especially if you work with 24 bit pictures). Luckily, MainActor can also play back an animation directly from hard disk - and even at a reasonable speed. The freely distributable display utility "MainView" has the same play back features as the main program. Since you can start MainView from the Shell as well as from the Workbench, it's no problem to incorporate it into directory utilities like "Directory Opus" or "DirWork".

Animations in the Amiga format ANIM are bitplane orientated, whereas PC animation formats are based on a concept known as "chunky pixels". Bit-plane animations can be played back very fast on the standard Amiga hardware, but not on graphics cards that also use chunky pixels. Vice versa, PC animations are fast when displayed on a graphics card, but regrettably slow on the normal Amiga

MainActor lets you work on more than one animation at a time.



You can even add sounds to your animation.

graphics chips.

MainActor's demo animation "BIRD5" for example (see picture 3), uses the chunky pixel format FLI. To decompress its picture data (which is done automatically while displaying the animation) on a 68030 Amiga a chunky pixel display needs only about 1.5 seconds, while the Amiga's standard graphics chips need over 50 seconds (see picture 4). The play back rate of the animation is accordingly slow.

So while MainActor can play back any of the supported formats on any of the supported display devices, it is advisable to first convert an animation into the format that is best suited to your display hardware. Thus you achieve the fastest and smoothest play back that is possible.

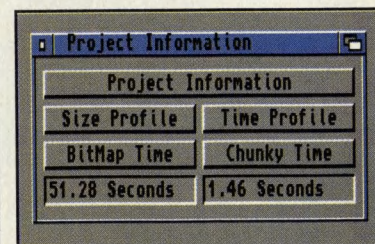
You can very easily convert any of the supported animation formats into any of the formats MainActor is able to save (see above list). Just load the animation, choose the output format and wait a few minutes while the program processes the frames and saves the animation. It is also possible to save selected frames of an animation in any of the supported picture formats.

If you use OS 3.0 or 3.1,

MainActor can display the animation in a resizeable window and dithers the pictures to adapt them to the number of available colours. What the program doesn't do, however, is change the number of colours or to scale the pictures (i. e. give them a different size). This means, MainActor cannot convert a true colour animation into an animation that uses 16 colours. For this you have to use Art Department Professional.

The extensive "ARexx" port of MainActor makes it possible to use the two programs as though they were one. Some example scripts show how to call ADPro from within MainActor, and it is a real pleasure to see these two programs work happily together on an animation. You can start ARexx scripts by selecting them in a file requester or you can place them on the function keys of your keyboard for immediate access.

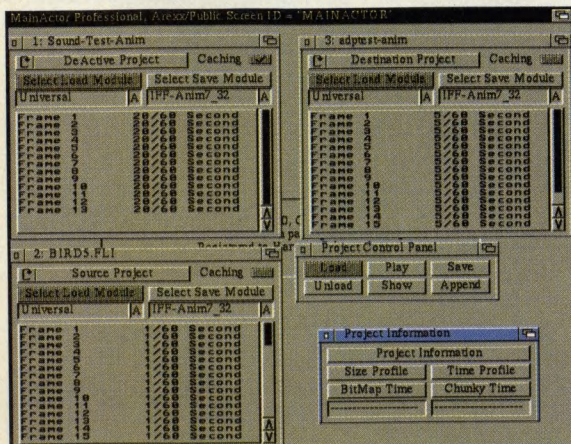
MainActor is very generous with information: In a special window you can find information on the number of frames, the number of colours, the size of the animation, and the size and compression method of the individual frames (see picture 5). The Size Profile window displays the size of the frames as a bar chart.



Displaying chunky pixel animations on the normal Amiga hardware results in excruciatingly low play back rates - unless you first convert the animation.

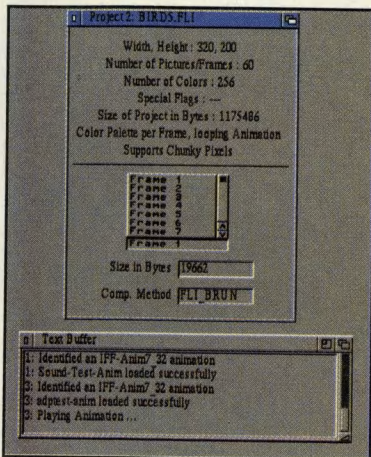
Even more interesting and useful is the Time Profile (see picture 6). In this window, MainActor shows you how much time is needed to decompress each frame of the animation and whether this is fast enough to play back the animation with the requested rate. For example, a frame that has the time code 5/60 is represented by a blue bar if the decompression time is shorter than 5/60 seconds.

If, however, the decompression time is longer than the frame's time code, the bar is coloured black. So the window gives you a quick and very convenient summary of your animation and shows you which frames need to be altered.



Interface

The user interface is Style Guide compliant and very flexible. It doesn't use a fixed layout, but allows you to determine the position of the lists and gadgets yourself. You can also change the screen mode and choose a font for the windows and menus and another one for the frame lists (see picture 7). This is especially important for users of graphics cards. If you've ever had the unpleasant experience of having to squint at a "Topaz 8" font on a high resolution display, then you know what I'm talking about.

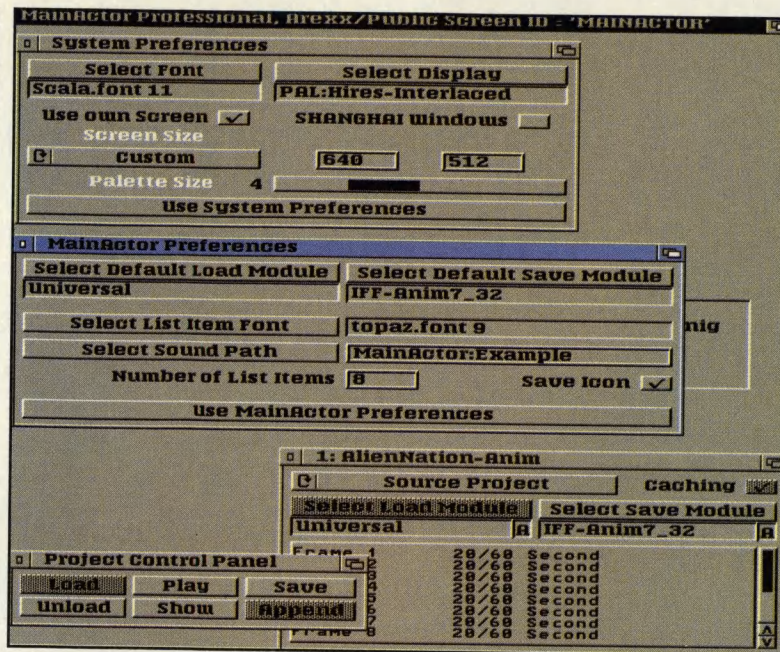
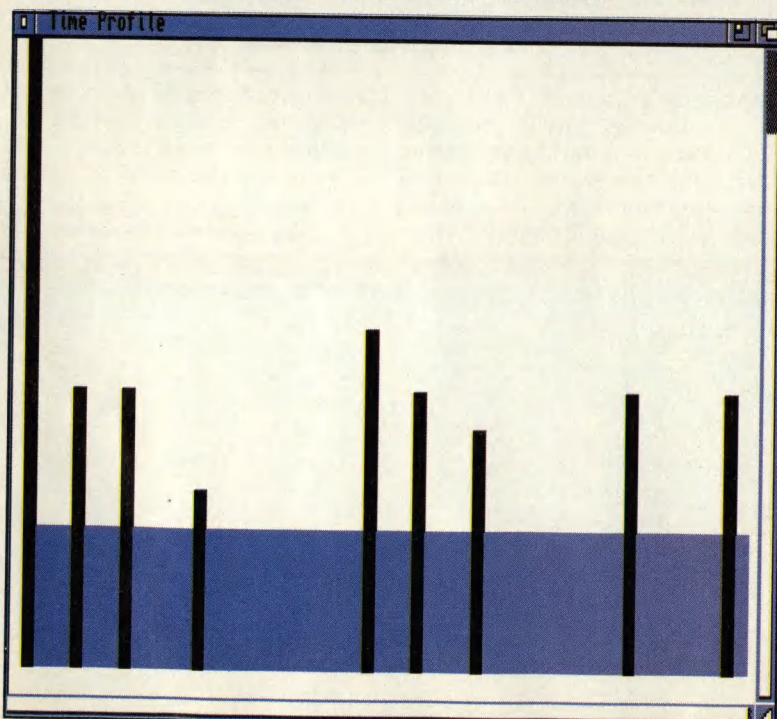


MainActor doesn't hold back any information.

Manual

The eighty page manual is easy to read, although some parts could have been done with a little bit more explanation. It is sufficiently illustrated and has a short tutorial as well as an index. But chances are you won't need it very often. Once you've understood the basic operations (i.e. after a few

The frames represented by black bars cannot be decompressed within the given time. I think I still need to put a bit of work into this animation.



minutes) the optional functions are self-explanatory - thanks to the very intuitive user interface.

Conclusion

It's not too difficult to come to a verdict. MainActor is an excellent product. If you are interested in creating animations, then you can hardly afford to miss this program - especially if you want to take full advantage of your graphics card.

But even if you just want to be able to watch PC animations, MainActor is worth considering. The price certainly is right. There is a demo version on Fish disk 914, so if you're still undecided, you can check it out yourself and find out if this is the right program for you. **AUI**

You can configure MainActor's interface according to your needs and taste.

Animation Formats

IFF ANIM 3 and IFF ANIM J: two very old and slightly obscure formats which the author of the program implemented for reasons of completeness and nostalgia only.

IFF ANIM 5: ANIM version Electronic Arts created for their Deluxe Paint. Every decent multimedia program is able to play back this format.

IFF ANIM 7 and IFF ANIM 8: newer and considerably faster versions of the ANIM format that often produce shorter files.

IFF ANIMBRUSH: for animation brushes made famous by Deluxe Paint. The current version of MainActor cannot save animations in this format.

Real3D (8 bit): animation format of the popular but stubborn raytracing software. Again, MainActor is currently not able to save animations in this format.

Picasso II, Retina, and Merlin (8, 16 and 24 Bit): special animation formats that make the best use of each graphics card's features.

EGS (8 and 24 Bit): special format for graphics cards that use the Enhanced Graphics System.

DL (8 bit): MS-DOS animation format that doesn't support data reduction.

FLI (8 Bit): quite an old MS-DOS animation format. The speed and the resolutions aren't very exciting, but you can find a lot of FLI animations on bulletin boards.

FLC (8 Bit): successor of FLC, it is faster and supports higher resolutions.

AVI (8 bit): animation format of "Video for Windows". At this time, MainActor supports 8 bit animations only, is not able to play back sound data and can't save animations in this format.

Picture Formats

IFF (8 and 24 Bit): native Amiga picture format that makes it so easy to exchange graphics data between different programs.

DataType (8 bit): If you have OS 3.0 or 3.1 MainActor can use the DataType modules of the Workbench. This enables the program to read JPEG, PostScript, or MacPaint files, for example.

Workbench Icons (4 bit): Well, you know these ones, don't you? The neat little pictures cluttering your Workbench screen or hiding in the drawers.

GIF (8 bit): famous MS-DOS picture format, developed by CompuServe. MainActor supports the variants 87A and 89A.

PCX (8 and 24 bit): another popular MS-DOS format.

BMP (2, 4, 8 and 24 bit): format mainly used in Windows.

Note: The current version of MainActor can save pictures in the formats IFF, BMP, and Workbench Icon only.

RATINGS

MainActor Professional

FEATURES	93%
PERFORMANCE	90%
EASE OF USE	94%
DOCUMENTATION	90%
VALUE FOR MONEY	97%
Overall Rating 93%	

INFO

Price: £50.00

Contact:

Blittersoft

40 Colley Hill, Bradwell

Milton Keynes, Bucks.

MK 13 9DB Tel: 0908 220 196

In Germany:

Village Tronic, Wellweg 95

D - 31157

Sarstedt Tel: +49 (0)5066 7013 0

When reviewing a new implementation of a language such as Basic, or C, it is reasonable to assume that most readers will know at least something about the language in the first place. With less widely used languages such an assumption is harder to justify which means that we need to kick off by explaining exactly what HeliOS is. Essentially it's a Forth-like language and Forth can, and probably should, be used as a model to get started with HeliOS coding. It is important however to be wary of carrying this analogy too far, because HeliOS is radically different in a great many respects from what you might call 'conventional' Forth. Most importantly it is more powerful yet easier to use - so anyone with a prejudice against stacks, reverse polish notation and so on, should certainly NOT take fright at the mention of Forth!

You may actually use any standard ASCII text editor to write HeliOS source files although generally it is most convenient to use the integrated HeliOS editors because you can compile code directly from them. Programs use a collection of subroutines called 'words', which are created

HeliOS

AUI EXCLUSIVE!

Paul Overaa test drives a speedy new programming language that is about to be released for the Amiga. Will it blitz the competition?

entry, mouse button depression, mouse movement, gadget selection, menu selection or timer event activation. KEY will report input events from whatever active window you specify and you can designate any window as the current input window using another HeliOS word MAKEINWINDOW. This scheme is immensely powerful and involves a special sub-task which

actively as you go (much like most modern day Basics). This feature of HeliOS makes it an easy language to learn especially coupled with the fact that there are only a few 'rules' to come to terms with and no constraints such as line numbers, or strictly typed variables. Traditional Forth employed a quite rigid and unusual form of source code stored in special blocks, but HeliOS allows much more code layout freedom.

Editor

HeliOS provides three standard editors (plus another that deals with program output) all of which offer a performance comparable with, and in some aspects superior to, editors provided with other languages. As well as

```

HeliOS V.6.05
Dict: 54638 Chip: 1752112 Fast: 2799784 Ed: 1 Ed: 2 Ed: 3 Out: Intpt: Row: 1 Col: 1 Size: 7960
Editor: Tutorial.src

Note that this example program does not make use of include symbols,
in order to allow it to be run on any HeliOS system.

FORGET **CORE**           \ Clear the user dictionary
DO DVARIAL SCREEN         \ Screen handle storage variable
DO DVARIAL WINDOW        \ Window handle storage variable
DO DVARIAL BITMAP         \ Variables to store useful values, which
DO DVARIAL RASTPORT       \ are collected at startup time in case of
DO DVARIAL VIEW           \ the need to use them later in graphics
DO DVARIAL VIEWPORT       \ related functions.

\ OPENSYSYSTEM - Opens a screen and a window and sets up Input/Output.
\ Includes an example of how to make an Amiga library call.
\ Returns "1" on the stack for success and "0" for failure.

: OPENSYSYSTEM            \ Start a word definition, the new word is
                           \ called, appropriately, "OPENSYSYSTEM"
TIMEOFF                  \ Disable the time display in the Interactive
                           \ HeliOS screen

```

HeliOS editors are extremely easy to use.

using a source code construct called the 'colon definition' (so called because each new subroutine definition starts with a colon character).

Within these definitions all the usual logical constructs such as IF-ELSE-THEN, BEGIN-UNTIL and so on can be used just like any other high-level language.

HeliOS provides two basic types of screen output - console out-

monitors all incoming input events transparently.

All this translates, from the programmer's point of view, to the easy-to-use single word KEY doing all the hard work. HeliOS incorporates the same sort of 'easy use' philosophy in many other areas.

What does HeliOS code look like? Well, listing 1 shows a short HeliOS example program that draws red circles with a black outline across

: EXAMPLE \ New program name

```

FWINDOW -1 POINTER \ Switch off mouse pointer
1 REPORTMOUSE \ Switch on mouse position reports
1 GFXOUTLINE \ Enable graphic "outline" mode
1 GFXSETOPEN \ Set graphic outline pen to black
6 GFXSETAPEN \ Set foreground drawing pen to red

```

```

BEGIN \ Start loop
GFXWAITTOF \ Wait for new frame
MOUSEX MOUSEY 8 4 GFXAREAELLIPSE \ Draw red circle with black
outline
GFXAREAEND \ Write area drawn to screen
?TERMINAL 27 = \ Wait for <Esc>
UNTIL

```

```

0 REPORTMOUSE \ Switch off mouse position reports
0 GFXOUTLINE \ Disable graphic "outline" mode

```

```

FWINDOW 0 POINTER \ Switch on mouse pointer
SCRCLR \ Clear HeliOS text display
FSTATUS \ Redraw HeliOS display imagery
;

```

EXAMPLE \ Run new program

Listing 1: An Example HeliOS program

the display as you move the mouse.

Although HeliOS produces compiled code it also has an interpretive mode as well. This means that while you can create fast compiled programs you can also test them inter-

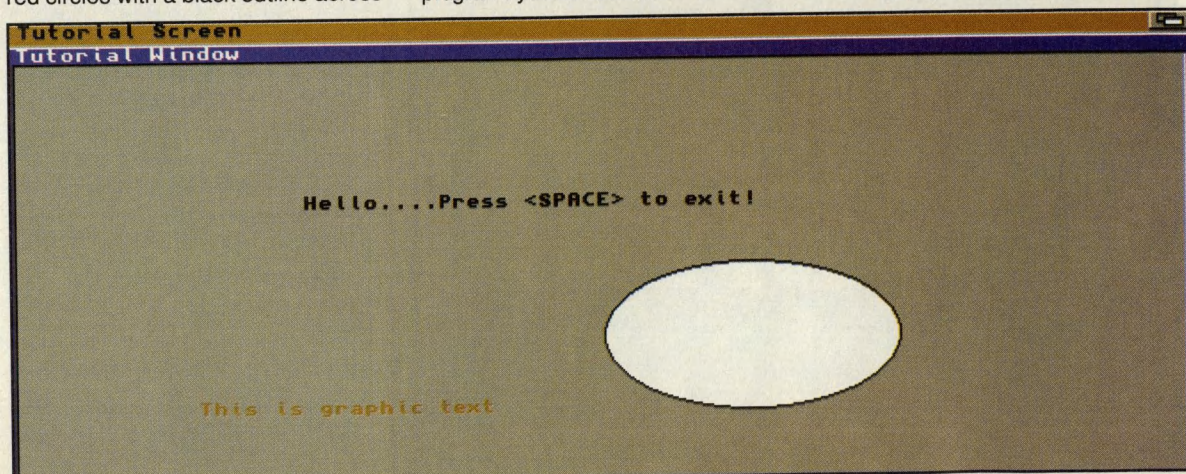
the usual types of cut/paste and search/replace facilities there is on-line help, multiple speed smooth scrolling, auto-indenting and columnar cut and paste.

Plenty of good demo programs are included with the HeliOS package.

HeliOS also offers an extremely sophisticated games writing environment.

put and graphic output and includes powerful routines which automate the setting up of both stream-based console text output and many graphical operations. Screens and windows are easy to set up and, for general purpose input, HeliOS has an input word KEY which causes a program to wait until an input event occurs.

Input events include keyboard



Macros are supported which allow inclusion of AmigaDOS and ARexx functions and macro nesting (up to a nesting level of 20) is also allowed. All of the HeliOS editors have split screen modes allowing you to use two editors on screen together (or to have two views of the same editor). This is useful for cut/paste and comparison purposes.

Compilation

HeliOS has a variety of compilation and execution functions with the simplest mode of compilation being when the interpreter is used to compile code

That Stack

As with Forth, HeliOS uses a stack to store sets of numbers which are going to be used almost at once by other subroutines. The stack can be regarded as a quick temporary store and typically one operation will put a number onto the stack, and the next will take the number off the stack and use it. You can think of it almost as a type of 'messenger' carrying data between different parts of your program. In the past many would-be Forth programmers had difficulty using the stack but with HeliOS there should be no such problems because the language provides a large number of stack control words. Traditional Forth had just a few stack control words, and managed any more complex operations needed by combining many of these simple words together. To help you get accustomed to the working of the stack, HeliOS has a permanent stack display at the top of the Interpreter window. In practice, doing a few calculations and manipulations and watching the stack display soon gives you a feeling for how the HeliOS stack works.

```

HeliOS V.6.05                                     13:00:36
Dict > 54138 Chip > 1751056 Fast > 2766744 [ ] Ed 1 Ed 2 Ed 3 Out [ ] Intpt [ ] REDG HELP
Editor 1 Tutorial.src [ ] 1M [ ] 2M Col > 4 Row > 46 Size > 7968 Find [ ]

1 STDSCREEN \ Initialises a standard NewScreen structure
              \ and sets Hires mode
LIT$ $Tutorial Screens$ \ Specify the screen title bar text
640 250 \ Specify screen width and height
3 \ Depth of screen (= number of bitplanes)
OPENSREEN \ Open a screen using the initialised structure
SCREEN D! \ Store the screen handle/pointer
SCREEN D@ \ Get SCREEN 32-bit pointer onto stack

D@> \ Test if SCREEN is greater than zero
      \ This checks to see if screen opened OK
      \ If SCREEN is zero we have trouble.....

IF \ If SCREEN is not zero we are OK.....

SCREEN D@ \ Get 32-bit pointer to screen
    
```

This screen grab would look more impressive if you could see it scrolling.



The fractal demos give a good indication of just how fast HeliOS code is!

into the dictionary for immediate use in the integrated HeliOS environment. HeliOS also allows you to compile overlay files which consist of a block of precompiled HeliOS code which can subsequently be run from either within the main interpreter environment or as a separate HeliOS stand-alone execution module.

There is a 'Run and Debug' button for each editor which with a single action lets you compile the current editor and automatically go to the interpreter in debug mode. Highlighted blocks of source code text can also be instantly compiled or debugged. When you want to test and run the source code you have written, you pass the

code over to the Interpreter. This has its own screen where it handles all matters relating to interpretation, debugging, and compiling. You can cut and paste between the Interpreter command lines and the editors (useful in testing short sections of code).

Debugger

Using a debugger is a matter of personal preference. In most cases you can debug HeliOS code perfectly adequately by the use of print statements from within your code combined with the use of WAITSPACE commands to

allow you to step through your code as it is executing. HeliOS does however provide a powerful debug facility which can be user-customised to do almost anything.

This debugger allows you to step through your code checking any aspect of the system as you go and carrying out any procedure required. You can, for example, pause the program, display variables, dump memory, single step, wait on variable states and so on. By default you debug every word, but this can be changed interactively while your program is running.

With HeliOS you can compile your code directly from the editor.

Much More

It's impossible to more than outline the full facilities that HeliOS provides. It has built in PowerPacker file de-crunching and IFF file parsing, automated IDCMP control, and it provides built in resource tracking and user-configurable error handling to ensure that resources allocated by a program are properly returned to the system on program closedown.

There is a precompiled 'interactive' include system which handles both official system include values and allows users symbols to be stored, plus extensive data structure manipulation facilities with structure allocation and deallocation functions, index-

```

HeliOS V.6.05                                     13:00:14
Dict > 54138 Chip > 1751408 Fast > 2775992 [ ] Ed 1 Ed 2 Ed 3 Out [ ] Intpt [ ] REDG HELP
Intpt Dbug 0

Session: #1 Start Time: 13:00:00

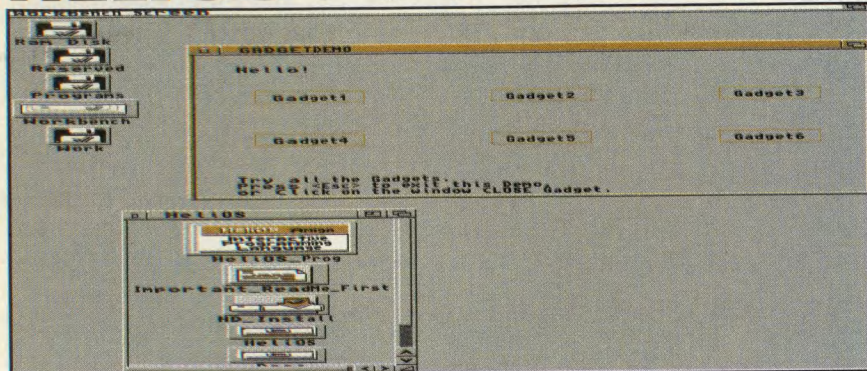
Compiling. Please wait.....

Session: #1 Final Time: 13:00:06 Elapsed Time: 0:00:06

STACK: EMPTY

OK >-----> OK
    
```


HELIOS CONTINUED



Intuition gadget handling is very straightforward.

ing routines for accessing the data fields of structures, words which allow incremental/decremental updates of field values and so on.

HeliOS also offers an extremely sophisticated games writing environment. A series of routines, run under interrupts, handle an enormous amount of the work involved in games coding. The routines are controlled just by plugging values into control structures so you don't need to understand how they work in order to use them.

There are facilities for CPU blitter emulation, multi-direction bitmap scrolling, BOB handling and sprite multiplexing, copper list manipulation, double/tripple display buffering, multi-slice display use and so on. The HeliOS system can also run any number of small 'robot' programs which allow you to perform highly efficient, synchronised, graphics operations.

Not Forth

Programs written in HeliOS run like greased lightning. You've got to see it to believe it. Beginners and experts alike are going to be able to do amazing things with HeliOS and, as you can imagine, games programmers are particularly well catered for. While the central core command set of HeliOS is based on a Forth-type model, it is clear that HeliOS has been so greatly expanded with Amiga-specific functions

that the vast majority of HeliOS commands are unique to HeliOS. HeliOS is also radically different to Forth in its internal working, so in general you should not assume that what you have here is simply an expanded Forth system.

Beginners and experts alike are going to be able to do amazing things with HeliOS.

HeliOS has been in development now for 5 years, and is fundamentally a very stable program on all Amigas. It has been used on every version of the OS, on all memory configurations, and will run on all 1+ meg Amigas, whatever the OS version or CPU type. Because HeliOS is so very fast in terms of code execution, it is likely that less powerful Amigas will run HeliOS code far better than say code created by Basic type programming languages.

Offer

The expected official release date for HeliOS is very early in the new year with the package being marketed directly by HeliOS Software. The first release will cost £50 including disk based documentation but printed documentation, more specialised enhance-

ment units, tutorials and so on, are also to be released in the coming months. In addition to this a range of simple utilities and games priced at £8 (like Defender which is on this month's SuperDisk No.51 - check it out to see the speed of HeliOS for yourself) and more sophisticated examples (£15-£25) which users will be able to

re-program themselves are also being prepared. For further details of the and other HeliOS related products contact HeliOS Software direct. AU

Library Use

Many Amiga library routine interfaces are included in HeliOS as part of the CORE dictionary commands. These can be used without you having to address the library directly. In addition, the main and most useful libraries - Dos, Exec, Graphics, Layers, and Intuition - are automatically opened for you when HeliOS starts up and closed when HeliOS closes down. If you do have to open a library yourself there is a simple to use HeliOS word called OPENLIB, which opens a library and returns the library base address on the stack. If, for example, we wanted to open the asl requester library the code would look like this:

```
D0 DVARIBLE DASLBASE \Create a 32-bit variable DASLBASE
LIT$ $asl.library$ \Put counted library name string on stack
0 \Put library revision number on stack
OPENLIB \OPEN the library
DASLBASE D! \Store the library handle
```

To close a library put the library base address on the stack and use the word CLOSELIB like this:

```
DASLBASE D@ CLOSELIB
```

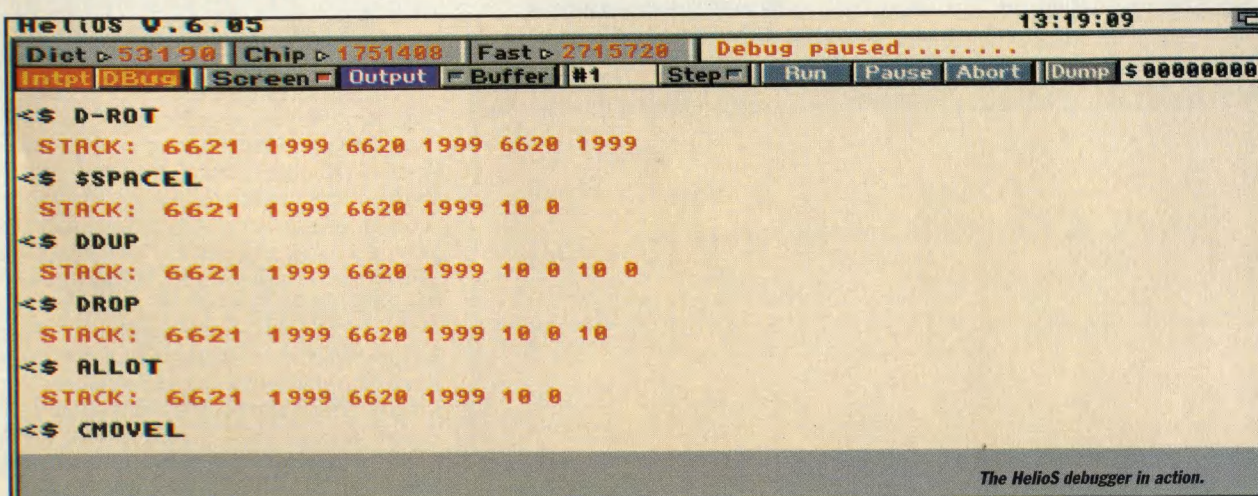
HeliOS handles library calling parameters in a manner similar to the way it is done in assembly language but using a set of dummy registers to store parameters and collect results. When HeliOS calls a library for you, using the HeliOS Word LIBRARY, it simply unloads the dummy registers into the actual 680x0 processor registers, calls the library, then unloads the 680x0 registers back into the dummy registers. The values in the dummy registers get retained until the next time you make a library call and this can often be taken advantage of when making a number of calls to the same library. Here's a simple example of the dummy register scheme in action:

```
BUFFERADDRESS D@ \Get buffer address onto stack
0 AREG D! \Store it in DUMMY ADDRESS REGISTER A0
```

```
BUFFERLENGTH D@ \Get buffer length onto stack
0 DREG D! \Store it in DUMMY DATA REGISTER D0
```

```
LIBRARYBASE \Put address of Library base store onto stack
-64 \Get library offset onto stack
LIBRARY \Call library
```

```
0 DREG D@ \Get result from DUMMY DATA REGISTER D0 onto stack
```



The Helios debugger in action.

RATINGS

HELIOS

FEATURES	85%
PERFORMANCE	95%
EASE OF USE	85%
DOCUMENTATION	65%
VALUE FOR MONEY	85%

Overall Rating 80%*

* rating has had to be based on the material supplied - final documentation is still in preparation

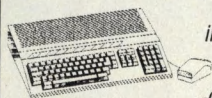
INFO

Price: £50
Contact: Helios Software
163 Huthwaite Road
Sutton-in-Ashfield, Notts
NG17 2HB
Tel: 0623-554828.

CALL ON 01442 233393 CALL ON 01442 233393 CALL ON 01442 233393

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includes on site warranty, free
software and mouse mat.

Race & Chase Innovations

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120Mb Hard Drive	£ 439	£ 479
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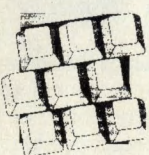
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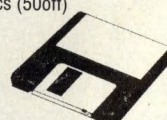
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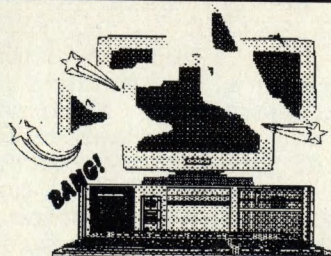
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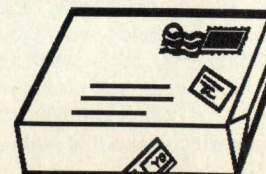
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Before I review the external turbo-tech clock cartridge I ought to set something straight. I love gadgets. Small electronic boxes of tricks really turn me on.

It's probably due to my cheapness. I love the idea of paying a small price for a whizzo gadget that transforms your computing environment with some sort of nifty, usable trick. There are not a lot of gadgets like that around. Honestly, what can you get for the Amiga under £20 that is really useful? Maybe a mouse-house or mouse mat - but that's not life-transforming stuff.

Victim

A built-in clock was an early victim of the need to keep the Amiga price down. It was a sad loss, since the usability and productivity of your computer is greatly enhanced by a clock. A clock would be a neat gadget to add to your Amiga - small, cheap, and it does something incredibly nifty - it keeps time.

Many programs are only fully usable when the computer can keep track of time. Account programs will know when to automatically update your balances, personal organisers can schedule appointments, and automatic hard-disk back-ups can be run.

Your saved programs and files will include the real date you saved them, spread-sheets can be linked to the date, and you can put a clock on your working screen to keep an eye on the time.



It just keeps ticking.

Add-on Time

The computer keeps track of time by accessing a battery-run clock chip. When the Amiga boots up, it asks the chip for the time and date, and then carries on from there by itself..

Most Amiga users gain a clock when they buy a memory and/or accelerator expansion card to put in the trapdoor slot.

Strangely enough, one of the most instantly accessible attractions of an expansion card is the usual built-in clock. Lots of Amiga buffs have proudly told me about their new expansion card by first mentioning the wonderful new clock.

Alternatives

If you can't yet afford an expansion card but would love a clock, then there are currently only two alternatives.

One is an internal clock, which would have to be attached to your current motherboard, and so voids your warranty (which ain't exactly worth the paper it's printed on at the moment).

The other option is buying an external clock which plugs into ports at

Mark Blackham test drives a gadget that is not only good and very useful but also suits his pocket and his idea of a turn on.

the back of the Amiga.

The newest external option is the Turbotech clock, which comes in a multi-use bubble pack with simple instructions and an installer disk.

It is a small, palm-of-the-hand sized gadget loosely encased in a plastic cover. One end fits easily into the floppy drive port. The other end has a 25-pin connector which is only there for cosmetic purposes. It is not a thru-port.

A thru-port is unnecessary since the clock can be plugged into the back of your last external floppy drive.

The disk which comes with the Turbotech clock provides a program which installs a time-reader into your start-up sequence. So whenever you

boot-up, the computer will read the time from the external gadget.

Unfortunately the disk provides nothing else besides a rather dismal LED-style clock display. The display preference set-ups provided by the standard Workbench are better. It's a shame because it would not have taken much to add some PD tools and utilities to make fuller use of the clock.

You need to use the standard workbench time-setting method for setting the time on the clock - which is simple enough. I kept an eye on the Turbotech clock's time for a month, and it did not appear to change significantly.

The Turbotech clock is therefore a simple, incredible usable and

well-priced gadget, which would have benefited from some additional software. Many of your current commercial programs will find a good use for the clock, and there are plenty of programs and utilities in the PD sector to milk extra use out of your purchase. **AUI**

RATINGS

Turbotech Clock	
FEATURES	89%
PERFORMANCE	95%
EASE OF USE	86%
VALUE FOR MONEY	88%

Overall Rating 90%

INFO

Price: £19.99
Contact: Siren Software
178 Bury New Road
Whitefield
Manchester M45 6QF
Tel: 0161 796 5279



A great feature of the range is a 55-page sheet feeder. That's what you'd expect on higher level models. Sadly, it was at the cost of losing a tractor feed for fanfold paper.

This is a rather peculiar situation. Fanfold paper is cheaper and more suitable to the type of draft, low quality output of these printers, yet Star provided a single-sheet feeder. Weird. They say fanfold paper will go through the feeder, but there are no pin-guides to help.

I struck many problems trying to get a straight paper feed - the main problem was alleviated by adjusting the paper-thickness lever, but the feeder still had a tendency to skew the page.

Conclusion

You can't fault Star on their ability to create dummy-proof machines. If you are new to computing and printing you can't go wrong by investing in an LC90 or better-quality LC240C. There's nothing to confuse you. The LC90 will do the trick with draft text and letters to friends and family, but may look naff to your bank manager or for CVs.

The LC240C is a much more

STAR GAZER

Dot Matrix printers are still being pushed by manufacturers despite the advanced quality offered by improving ink-jet technology and the falling price of laser printers.

Despite all the stick given to dot matrix technology, the fact is that they give make very acceptable print quality available to the average user at an affordable price.

I've used laser printers constantly in business. I know the speed and superb quality cannot be beaten but I never feel ashamed when I present material produced on my home dot matrix printer.

The new family of printers from Star aims to satisfy the continuing dot matrix market. We tested the top and bottom of their Plug 'N' Print range - the LC90 and LC240C. Those strangely familiar names bring to mind the well-respected Citizen Swift range but we're talking two very different calibre of printers here. In spite of their age, Swifts still do the business. Unfortunately, Star's reputation for low-end stuff has been confirmed again by these LCs.

The Star's are compact and incredibly easy to use. Both use almost exactly the same light plastic casing, fronted by a simple control panel consisting of only two touch-pad buttons.

Mark Blackham pulls out his telescope and takes a gander at new Stars on the printers scene.

One of those buttons is the on-line and sleep function. There is no ON switch, so you have to put the machine in SLEEP mode for short periods of non-use and unplug it when you've finished working. That's a pain.

Simplicity is the key to the range. I unpacked, connected each of them, and was printing out pages in less than ten minutes. There is no printer cable supplied, so be sure to get the store to throw one in for free, or at least cheap, damn them.

Star do supply a starter print ribbon, which is a doddle to install. Don't use the supplied colour ribbon on the 240C if you're only printing out black and white. It's not that you can't - it's just a waste of valuable ribbon.

Firing up a low-spec text processor like Protext, I was immediately able to print out very capable looking text on both of them. Using Wordworth SE with some special fonts, the LC90 printer output looked quite passable indeed. It still had a slightly out-of-focus appearance. Some jostling with software driven printer configurations and using special fonts will improve the

usual look of the LC90, but not by much.

The LC240C output is vastly better. The colours are strong and vibrant. It is basically the same machine as the LC240, but with the addition of a mechanism that moves the colour ribbon up and down to make your technicolour output.

Not having internal fonts saves fiddling with set-ups, but makes the printer reliant on your word processing software and current printer drivers. That can slow printing times down quite considerably. The LC90 took ages printing a basic Protext page and absolutely crawled while struggling through a Wordworth page.

The LC240C took more than fifteen minutes to print out a page of short lined double-spaced text - with each line a different colour. It's not often you'd do that, but it gives you an idea of the lack of speed.

The printing is also done with a rather large amount of noise. The cover isn't dampened with any foam, and the large internal empty space acts like an echo chamber.

capable piece of kit, with the useful addition of colour. The output will satisfy and suffice for most purposes.

The Star Plug 'N' Play range will print out a respectable looking page and keep novices happy. How long you'd remain satisfied, especially when you see what you could have bought for a similar dosh outlay, is for you to figure out. **AUI**

RATINGS

Star LC90/LC240C

PERFORMANCE	60%
EASE OF USE	96%
DOCUMENTATION	90%
VALUE FOR MONEY	55%

Overall Rating 60%

INFO

Prices: Excl. VAT

LC90: £129

LC240c: £169

Contact: Star Micronics UK

Star House,

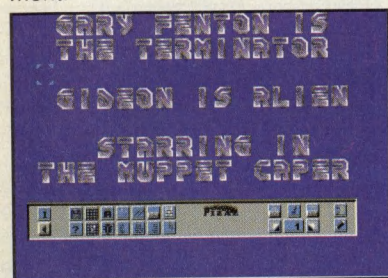
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The Amiga has always played a big part in video production with a whole suite of powerful software. A new package has arrived promising high quality at a low cost. Gary Fenton tests it out.

Billed as the "ultimate video titling system", Pizaz is said to have been two years in the making and incorporate hardware scrolling, animated effects, and a modular design for future enhancement.



Captions are simple to create but the fonts are limiting.

Not having seen a new budget titling package for the Amiga since Scroller 2, I was especially interested to see what Pizaz offered the home video enthusiast, or indeed the professional user too, if that "ultimate" description was true.

The package is neatly presented in a video case with a helpful quick start guide, a detailed manual and 11 disks! Pizaz can be run straight from the disks or installed to a hard drive on which it will occupy 4Mb of disk space.

Pizaz uses an icon orientated interface which gives a pleasant, uncluttered look. A quick flick through the manual and you soon become familiar with each icon's function. Text is typed directly onto the screen and works just like a simple word processor. Each line of text can be justified to the left, right, or centre at the press of a button.

There is, however, no way to pick up text and relocate it with the mouse, so it's a question of hitting the return key to shift text down the page. I haven't found a way to reposition text up the screen so you have to delete it and type it in again at the new position. There are no cut and paste or word wrap features either.

OFonts

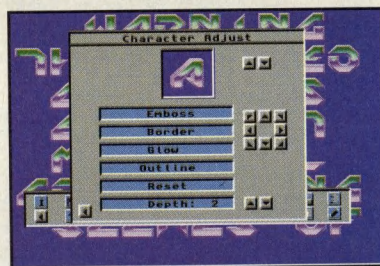
Only three fonts come with Pizaz and Amiga fonts can't be used so you're immediately limited to just three types. However, we are told that an Amiga to Pizaz font converter program will be available about now for £39.99. All three supplied fonts are very colourful

with nice graduations giving a shiny 3D appearance. Kerning controls allow the space between each character and line to be altered, but this is global to the whole page and can't be used to kern individual characters.

Fonts can be customised with

Pizaz

emboss, outline and border effects and variable depths and directions. A "glow" effect makes the font's outline flash. There are no bold, italic or underline styles and any effect you choose is applied to all of the text on the current page.



This menu lets you adjust the font's attributes.

The quality of scrolling (both horizontal and vertical) is very smooth, except when text scrolls past other text at higher speeds. Each character, word, line, or page can be scrolled one at a time, but the same scroll effect is applied to the entire page. The special animation effects are expand, rotate, and fold. Each font can only do one of these effects, and they are not particularly amazing. More interesting titling can be achieved in DPaint III.

An edit list menu in Pizaz is there to keep track of the pages you have created and lets you edit the running order of each page.

Conclusion

I would like to say that Pizaz is a very useful package with lots of neat features and effects. Unfortunately it's

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ACID PARK



Titling with Pizaz: Surprisingly it uses a low resolution screen mode.

been advisable is for VideoFX to have carried out an extensive beta testing programme before releasing Pizaz. We are often involved in beta testing of this kind and are always happy to help with suggestions before a product is launched as is the worldwide network of highly expert Amiga users. It's more than likely that many of the faults with Pizaz could have been ironed out at that stage, as indeed they may be for some future version.

not and is nothing more than basic in what it provides. Supplying three fonts is totally inadequate considering they only come in one size each. You can't even enjoy a mixture of fonts and attributes on the same page! Professionally speaking, I would never use these fonts because they don't look entirely legible once you've keyed them on top of your video footage.

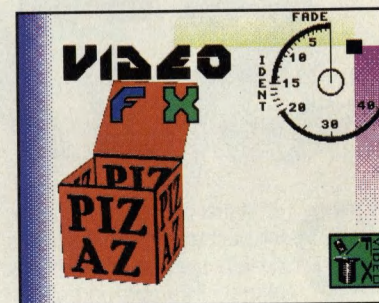
Pizaz's background colour can't be changed so you've have must with a genlock if you don't want a garish mauve background behind your titles. Pizaz doesn't support graphics of any kind; no brushes, no boxes, no lines.

I appreciate that Video FX have put a hell of a lot of time and money into their product, but they should have at least made it as worthy as Scroller 2 or Scala Home Titler if they intended it to sell well.



The scroll menu: a nice touch is the ability to scroll text under as well as over other text.

There are clearly some worthwhile talents behind this product but today the Amiga market is a very demanding one with, even at the home user level, professional standards required. What would probably have



Part of the title screen animation which loads every time you start Pizaz.

Bearing everything in mind, I can't honestly recommend Pizaz and suggest you check out the competition instead if you need a budget titler. If you doubt my words you can always purchase a demo copy for £10 (refundable on purchase) and see for yourself. **AUI**

RATINGS

Pizaz

FEATURES	55%
PERFORMANCE	65%
DOCUMENTATION	90%
EASE OF USE	70%
VALUE FOR MONEY	55%
Overall Rating 60%	

INFO

Price: £59.99
Contact: Video FX,
291 High Street, Giflach Goch,
Mid Glamorgan, CF39 8SH
Tel: 0443 674385



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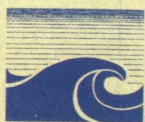
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Syncmaster 3Ne - top quality and low price from the biggest monitor manufacturer in the world.

Samsung SyncMaster 3Ne

Having a good display is essential if you use your computer regularly. Using a TV through a modulator is a sure-fire way of ruining your eyesight and a blurry low res monitor is no substitute for a good high resolution model.

My ageing Commodore 1950 multiscan monitor finally popped its clogs recently, so I had to look around for a replacement. The monitor we settled on was this Samsung model. You'll see from this test drive of it why.

The 3NE, like the 1950, is a 14" multiscanning (the commonly used term "multisync" although accurate, is actually an NEC trademark) monitor, able to cope with a wide range of input frequencies. Unfortunately, these do not include some of the Amiga video modes, which use a lower horizontal frequency (15Khz) than the Samsung can cope with. This isn't too much of a problem if you have an AGA Amiga and use the "DoublePal" modes (31Khz), which do come within the reach of most multiscan monitors. However, most games and a lot of pre-AGA software bypass this, even if you have mode promotion turned on.

Frying your brain or ruining your eyes? Aitor Ibarra test drives a low price, high quality solution to the monitor problem.

You will also lose the use of the early startup screen, which many users find essential, as this only comes up in NTSC or PAL modes. Even if you can cope with all this, you have another problem, as the Amiga video port is physically and electrically incompatible with the standard VGA style connector on the Samsung and most other multiscans, including the old Commodore 1950 and 1960.

Commodore addressed this problem by producing a special adaptor, although this was hard to come by at the best of times (even before the current difficulties) unless you actually went and bought one of their monitors. There is a third-party adapter, the AMI-VGA, looked at by Alan Puzey in his Video Column in the December **AUI**, which also de-interlaces interlace screens, removing the flicker.

No Problems

If you use an A3000, as I do, then you'll have no problems at all, because of the built in flicker-fixer, which does a good job of converting all screen modes (except SuperHiRes) into VGA signals, de-interlaces them, and puts them out through a proper VGA connector.

This flicker-fixer was also sold by Commodore as a separate upgrade for Amiga 2000's called the Display Enhancer. The original "Flicker-fixer" was a card by MicroWay. Ideally, all Amigas would support a wider range of monitors directly - let's hope that problems like this are dealt with properly in the future.

The other way of using a multiscan monitor with an Amiga, and one that will really show off the monitor's quality, is with one of the many 24bit graphics cards that are designed for computer

monitors rather than video displays. (OpalVision is out until they release a scan-doubler, but cards like the Picasso and Retina are fine, they actually require a VGA, SVGA or multiscan monitor). The Samsung will work at resolutions up to 1024 x 768, non-interlaced.

Working with your Amiga, the Samsung 3Ne is an excellent performer. The colour is vibrant, text is very crisp - thanks to the 0.28 mm dot pitch - and it also complies with the MPR2 radiation emission standards, so it won't fry your brain as much as older monitors!

Flat Screen

The screen is very flat, not quite as flat as a Trinitron tube but good nonetheless, and you can optically cancel horizontal distortion with a neat control. This pulls the sides of the picture in, so that you can make them totally straight. At the extreme setting the screen looks a bit like an hourglass!

This control is situated behind a panel at the front of the monitor, with the other controls, which position the display and control its size vertically and horizontally - so you can see the whole of overscan screens if necessary.

The whole thing is very well put together and sits on top of a tilt and swivel stand, which you can remove if you want. The Samsung SyncMaster 3Ne is primarily aimed at the PC market, but it also works with Macintoshes as well as our beloved Amiga (when properly equipped).

There are no speakers in this monitor, so you'll have to use external speakers, or better still, put your lovely Amiga sound through a proper hifi system and hear it as it was meant to be heard. Very few multiscans have speakers, as they require extra shielding to stop the magnets distorting the picture.

Samsung are the largest manufacturer of monitors in the world, so the quality of this monitor isn't such a surprise. The price is, however. I bought this monitor for almost half of what I paid for my original 1950, and I would say it is at least 50% better. If you have a system that can use it, then I would recommend this over every other 14" monitor available. **AUI**

RATINGS

Samsung

VALUE FOR MONEY	95%
FEATURES	75%
DOCUMENTATION	85%

Overall Rating 85%

INFO

Price: RRP is £269 + VAT but you can get it for less if you shop around.

Contact:

Samsung UK, 225 Hook Rise,
Surbiton, Surrey KT6 7LD
Tel: 081 391 0168

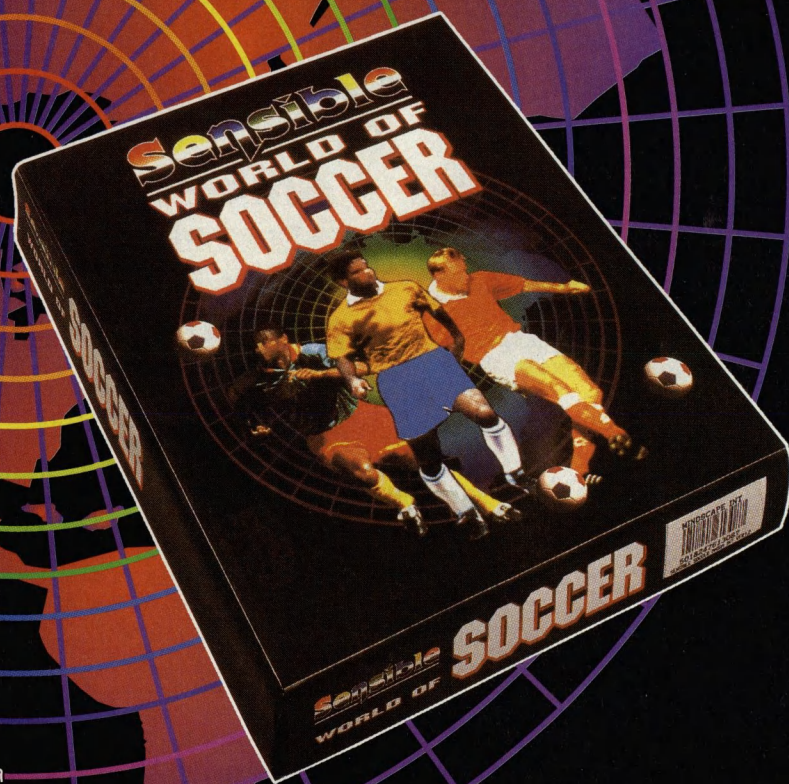
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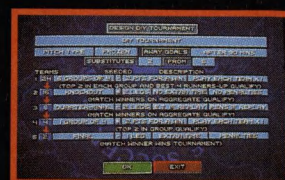
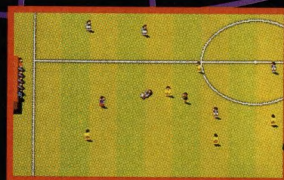
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I was slightly worried when we received this modem for review. I couldn't find anything on the modem or in the manual which said by whom it had been made.. All it says is "Fax Modem" on the box. What no identity, no brand, why the mystery?

The modem itself is the smallest and lightest I have seen. At first glance, I couldn't seem to find any connection points. Another mystery? However, when I took a closer look, they were hidden behind a small pull down flap at the back of the unit. No name but somebody knew how to design an electronic device...

As a lot of others on the market today, this modem is not BT approved, this is not necessarily a bad thing. It just means that if it damages BT's lines in any way, you are liable. What's a few million damages between friends? Don't worry though, there is very little likelihood of that and many people believe that

have been manufactured with the idea of distributing it in the United States where the FCC (Federal Communication Commission) regulates which electrical apparatus can be sold to the public.

The "Online" was made in Taiwan, and I would guess that most of them will go to companies who will then badge them with their own logos and sell them under their own company name. With its neat appearance and excellent performance it is a product which few companies would be ashamed to claim as their own manufacture.

When you buy a new modem for your Amiga, you usually get some software with it. Generally the software will not be Amiga but PC. The "Online" is no exception I am afraid. You get two Fax and one comms package. What is good though is the inclusion of some Amiga PD comms software which is



This fax modem is brand 'x'. Where it comes from, who knows?

Getting Online?

the whole BT approved thing is just a way of selling BT equipment.

Connection to the Amiga was easy via the supplied Serial cable. This is slightly different from those we usually get. It is split at one end and has a 9 Way adapter connected as well as the usual 25 way version. This is both useful for connection to a PC and especially helpful for people with a SX-1 connected to a CD-32.

Online?

The "Online" Fax modem as we must call it because there is no other name stamped on it, and that's who distributes it in the UK, is a very neat and efficient looking box. Less than A5 in size it has clearly been designed very professionally. Probably because on the plaque at the back it states that it complies with FCC rules, it may well

Gideon Overhead finds a mysterious little package that though brandless may be just the thing to get you online.

thrown in free by Online PD. This is an excellent move as there is precious little commercial software around.

With the "Online" you get Ncomm V3, and TrapFax. Ncomm 3 is one of the best comms packages around but will have to be registered to get the full benefit from it, and this is something I highly recommend. Amiga Fax is a simple but effective fax program.

Tests

So did it work? Yes, it worked flawlessly. The "Online" modem's top speed

is 14400 for data, and 9600 for fax. I had no problems connecting at full speed to all the BBSs with which I tried it. I achieved speeds of approximately 3000 cps (characters per second) with ASCII text, and 1700 with an archived file. These speeds are excellent.

The modem accepts the AT command set which is a way of configuring it. Once configured, the settings can be stored in non-volatile RAM which means you can turn it off and the information will stay there. The only niggle was that the speaker was very quiet. On most modems you can hear the dialling and connecting quite clearly. Even giving the modem the command ATL3 which turns the volume up to full, it was still quieter than it should have been. This is not a major problem, most people like their modems quiet. So do their neighbours.

Conclusion

The very well designed appearance of the "Online" modem and the price per value performance it gives makes it an impressive little addition to anyone's communications armoury. The Amiga

software that comes with it should be more than adequate for any use on the expanding world of Amiga based communications. In fact it's probably the best communications software available in the Public Domain.

At £149 this modem may not be considered cheap especially as prices

are coming down fast. But in our tests it stood up well and performs with reliability. If you are thinking of getting onto the Internet or connecting yourself with the outside world - online - as you and most people

probably are, then this modem is certainly one which you should seriously consider. **AUI**

The settings can be stored in non-volatile RAM which means you can turn it off and the information will stay there.



To give you an idea of its petite stature.

RATINGS

Online PD

FEATURES	80%
DOCUMENTATION	95%
PERFORMANCE	90%
VALUE FOR MONEY	80%
EASE OF USE	95%

Overall Rating 88%

INFO

Price: £149.00
Contact: Online PD
1 The Cloisters, Halsall lane,
Formby, Liverpool L37 3PX
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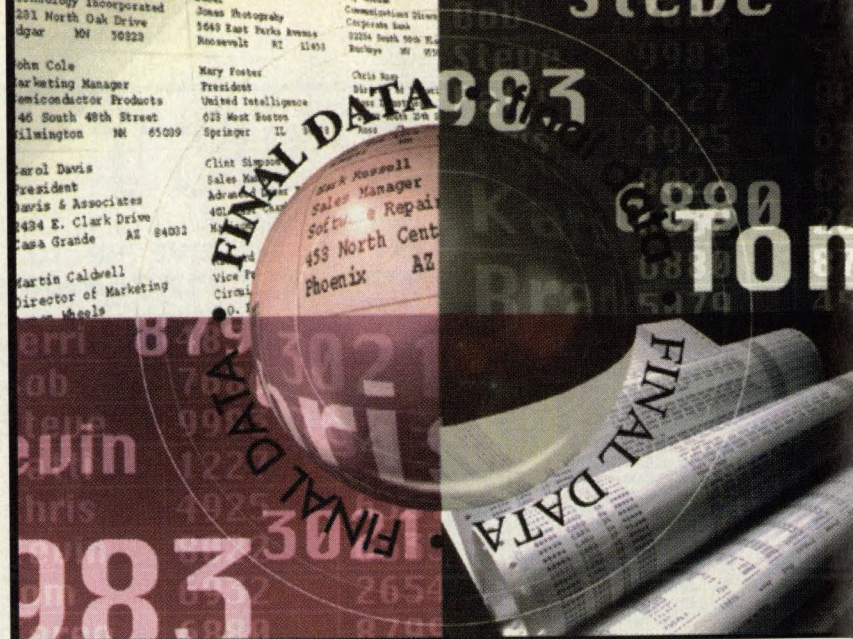
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Final Data



The cover of Final Data evokes power it may not show.

Many people are confused by the difference between databases and spreadsheets. The latter were historically a more complex means of managing data and an aid to analysing that information. Databases were simpler programs which compiled and maintained lists of numerical and alphabetical data.

The difference has become less clear recently as software designers have built powerful spreadsheet-style facilities into databases. Unfortunately, as databases grow more powerful, their ease of use often shrinks. Merely setting up a new list can be the biggest of hurdles.

Acutely aware of that problem, Softwood have overcome the wave of complexity befalling databases with Final Data. The secret of this 'flat-file' database is its simplicity.

If you would like to catalogue your CDs or video tapes, update the list with new additions to the collection, and print out the results, then Final Data is perfect.

If you want to keep names and addresses, merge them with letters created on a word processor, and print out address labels, then Final Data is ideal.

If you want to do anything more, then look elsewhere.

Mark Blackham test drives a new Softwood program that takes the mystery out of databases by keeping it simple.

While it is a companion piece of software to Final Writer and Final Copy, the program can be used alone. Its primary 'external' use with other software, to merge an address list with documents created on a word processor, can be fulfilled with any program which accepts ASCII files (virtually everything).

Final Data has potential if you use your imagination.

Huge

Final Data will let you sort the data columns in ascending or descending alpha or numerical order. You can also easily and quickly search huge lists for specific data.

You can perform calculations on columns, but the manual is woefully inadequate in giving you instructions. It offers some very basic suggestions and then assumes that even this facility is a little more complex than most users can handle. The secret of simplicity is also the program's downfall.

In "getting back to basics" Final Data lost much of its usefulness.

Once you have your list there isn't much you can do with it. Print it out, turn it into labels, look at it - and not much else.

Half Full

Final Data comes in one big, glorious, professional looking box containing a well produced, easily understood, and informative manual, and one half full floppy disk.

That's how simple the program is - 54% of a floppy disk. Depending on your requirements, that simplicity is either a blessing or curse. Personally, I find it difficult to pay £40 for such a small program, no matter how slick it is.

Final Data has potential if you use your imagination. Take one of the sample lists - a real estate agent's list of properties in southern California. On the face of it there isn't much you can do besides look at it, print it out or form it into labels. To make the list usable for clients you could move the price column to the front and sort it in ascending order. Potential buyers could then quickly find properties in their price range. Similarly, by moving the area column to the front and sorting that by alpha, buyers could quickly find the area in which they are interested, and then the price, before looking at the property details.

A local politician, or any opinion pollster, would want to create a list which included people's voting or response details. A spreadsheet could be manipulated to give you the results from one or a couple of columns and

then give you a graphical display of the results. In Final Data a little more work will at least give you a numerical result. Each possible answer - say Yes, No, Don't Know - could be assigned its own column, with the number of entries in each column tallied by Final Data at the bottom.

Conclusion

Final Data has re-established the differences between a spreadsheet and a database by going back to basics. It is accessible, easy to understand and fast. Its capabilities are simple. It will not handle your more complex demands for manipulating and analysing the information - but it never claimed it would.

If £40 is burning a hole in your pocket and you like the reliability and solidness of Softwood products, then Final Data will meet your fundamental database requirements. If you need more power for the pound, then look for a more advanced information-handler. There are plenty in the public domain as well as in your computer store. **AUI**

Final Data - Release 1								
Listings								
	Dwelling	Location	Beds	Baths	Garage	Pool	Price	OWC
1	House	San Francisco	5	4	4	Y	\$5,000,000	N
2	House	San Clemente	5	4	4	Y	\$4,000,000	N
3	House	Malibu	4	3	3	Y	\$1,400,000	Y
4	Penthouse	Century City	3	3	Y	Y	\$1,250,000	Y
5	Beach House	Malibu	3	3	2	N	\$1,000,000	N
6	House	Tucson	3	2	2	N	\$900,000	Y
7	Beach House	Santa Barbara	2	2	N	N	\$750,000	Y
8	Beach House	Santa Barbara	3	3	2	N	\$600,000	N
9	House	Santa Barbara	5	3	3	Y	\$500,000	N
10	House	San Francisco	3	2	Y	Y	\$450,000	N
11	Duplex	Encino	4/4	3/3	2/2	N	\$450,000	N
12	House	San Francisco	4	3	2	N	\$400,000	N
13	Townhouse	Malibu	3	2	Y	N	\$400,000	N
14	House	Pasadena	4	3	3	Y	\$400,000	Y
15	House	Santa Barbara	4	3	3	N	\$400,000	Y
16	House	Santa Monica	4	3	3	N	\$400,000	Y
17	House	San Jose	3	2	Y	N	\$350,000	Y
							32,789,500	

Looks boring, but it's still useful.

RATINGS

Final Data

FEATURES	60%
EASE OF USE	96%
DOCUMENTATION	88%
VALUE FOR MONEY	64%

Overall Rating 68%

INFO

Price:

£39.95 or £34.95 to registered users of Softwood products

CONTACT:

Softwood Products Europe
New Street
Alfredton
Derbyshire DE55 7BP
Tel: 01 773 836781

It has been a long and sorry saga. Wordworth 3 was heralded with great splurges of pre-publicity but arrived on the market in a very sad state. Updates did little to repair the real and perceived damage.

To give Digita their due, they put their hands up to the early mistakes and quickly set about solving them. Wordworth 3.1 recently delivered everything, and more, that had been promised.

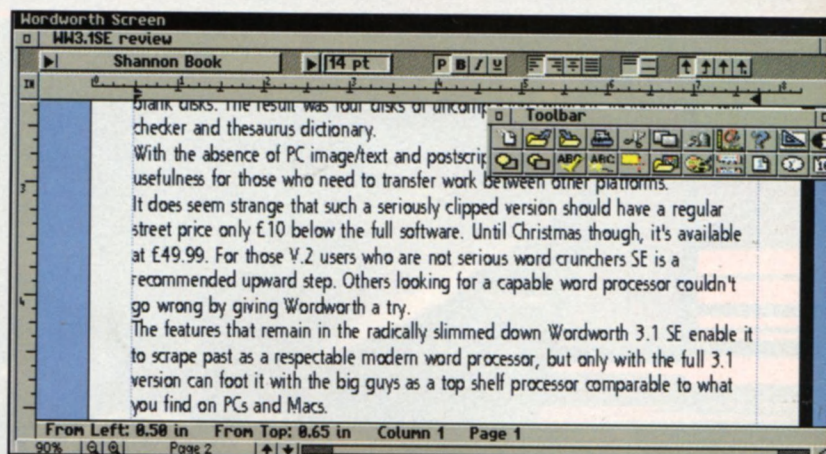
Even with the complete and bug-free 3.1, a major problem remained. The word processor was simply too big. It would only run on Amigas with more than 3 Meg memory and a hard drive (or two floppy drives).

tures and accept that SE is a capable and polished word processor but no more than you should expect.

Superb

On the plus side the losses are not that major to anyone simply wanting a good word processor for letters, documents and even a bit of basic desk-top publishing. SE has a superb front end and still has the wow-factor special text effects. Realistically the use of these effects is limited in practical application, but it is nice to have them available.

The front end now closely mimics the standard PC and Mac word processor formats, with clear icons for user-definable commands down the



I've got a brand new floating toolbox.

The Single Floppy Wordworth

Since many eager Amiga users have relatively unexpanded systems, they were missing out on the advanced software, and Digita were excluding themselves from extra profit potential.

Smaller Spec

Hot on the heels of V3.1 Digita have now released version V3.1 SE - a compacted version to run on smaller spec Amigas.

Mark Blackham test drives a new version of Digita's word renowned word processor that is smaller but not necessarily greater.

left-hand side (or as a floating tool bar) and access to font changing options and page format along the top.

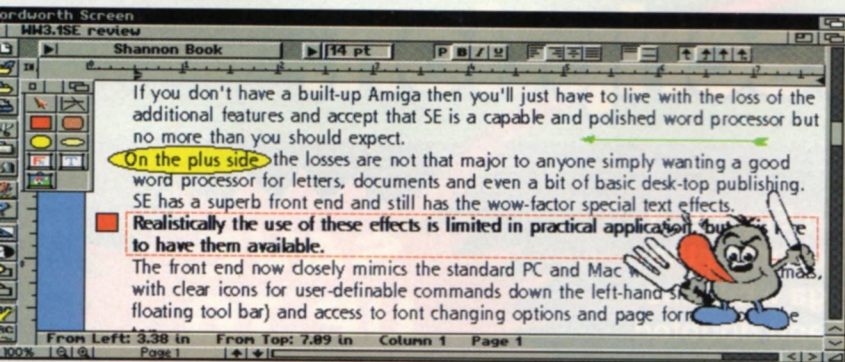
find the mind-bending slow loading and endless disk-changing frustratingly still present in SE. If you cannot afford to expand your system there is no alternative.

The SE installation software is a dream to use. Installing SE onto a hard disk took me less than five minutes. The bad news is that installing it onto floppy disks took more than twenty minutes, including time for the installation programme to automatically format my blank disks. The result was four disks of uncompact software, including the spell checker and thesaurus dictionary.

With the absence of PC image/text and postscript compatibility, SE loses its usefulness for those who need to transfer work between other platforms. It does seem strange that such a seriously clipped version should have a regular street price only £10 below the full software. Though, it's presently available at £49.99. For those

V.2 users who are not serious word crunchers SE is a recommended upward step. Others looking for a capable word processor couldn't go wrong by giving Wordworth a try.

The features that remain in the radically slimmed down Wordworth 3.1 SE enable it to scrape past as a respectable modern word processor, but only with the full 3.1 version can foot it with the big guys as a top shelf processor comparable to what you find on PCs and Macs. **AUI**



Freely mix text, pictures and objects.

The "Special Edition" isn't really all that special at all. The addition of two exciting extra letters to the name doesn't mean you get more - it means you get less. SE is missing a large chunk of what makes the improved Wordworth so desirable. Gone are the new additions to Wordworth 3 like PC text file format support, EPS graphics, tables and calculations, landscape printing option, screen saver, clock, 'play-time' game, bookmark, go-to-page, endnote, speech selection, index and contents creator and hot-link support. These features make 3.1 a top rate fully fledged "real" word processor, but their absence in the SE version leaves buyers with a very standard program.

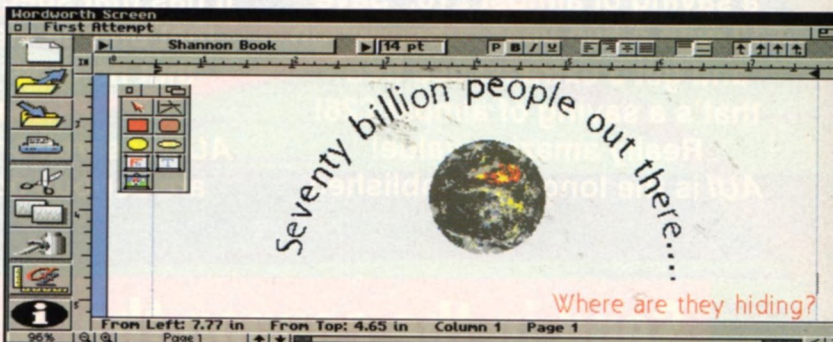
However, if you don't have a built-up Amiga then you'll just have to live with the loss of the additional fea-

There is also an on-line help facility (which makes up for the absence of a thorough instruction manual) along with nifty new commands like "Open Recent" document and "Auto Correct" spelling.

Drag and Drop

The facility which I love is "Drag and Drop" editing. It's a facility available on many PC word processors which allows the user to click on a selected text block and drag it with the mouse to a new position. This saves fussing about with pull-down requesters and keyboard commands.

The 'attraction' of SE is that it can be used on 2Meg Amigas with one floppy drive. Those of us who used Wordworth 2 with one floppy drive will



Go on... play around with the text effects.

RATINGS

Wordworth 3.1 SE

FEATURES	80%
EASE OF USE	93%
DOCUMENTATION	88%
PERFORMANCE	90%
VALUE FOR MONEY	90%

Overall Rating 80%

INFO

Price: £69.99
Contact: Digita International Ltd.
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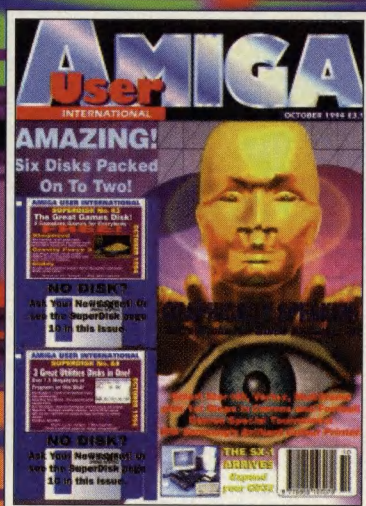
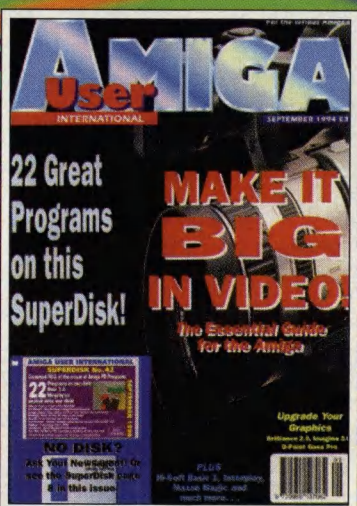
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Computer Graphics Expo

The Computer Graphics Expo, held recently in London, highlighted how computer graphics now rule over video production and are having a strong and growing impact on worldwide communications.

I happily joined the throngs of eager suits, cyberpunks and salesmen who flocked to Wembley for this festival of visual magic. Besides a huge exhibition of graphics technology, there were also on offer courses on using the technology, and a conference to discuss the issues and future of this burgeoning industry. Thrown in for good measure was the London Effects and Animation Festival which collected together some of the most breathtaking uses of computer graphic technology from short films and commercials to music videos and just downright clever design.

Manufacturers and software developers were boasting how their work has been used in advertisements, movies and TV programmes. There were easily recognisable clips from *Aliens*, *Northern Exposure*, any movies with Arnold Swartzenegger, and the Reebok TV ad featuring George Best, Bobbie Charlton and Ryan Giggs.

Reality?

Almost everything we see on TV or film today has been tampered with in some way by a computer and software designed to handle digital visual information. "A photo never lies" is a dead cliché.

Computer-generated 'realities' are dominating those media that define Nineties culture - television and film - in two major ways. First,

Computer graphics have thoroughly permeated our lives. The influence of computer graphics technology becomes obvious when you consider that the media it dominates - film and television - are also the ways in which most people get their information reports

Mark Blackham.

the technology is used in forms which are undetectable. What we see on the screen can be, and is, subtly altered, removed or added to, with the scene deceptively maintaining its impression of absolute reality. The viewer does not notice that anything is artificial.

The power of technology to alter 'reality' has outclassed the ability of most people to discern the changes. We still think that

truth is what we see, hear and physically witness - even if it is on video.

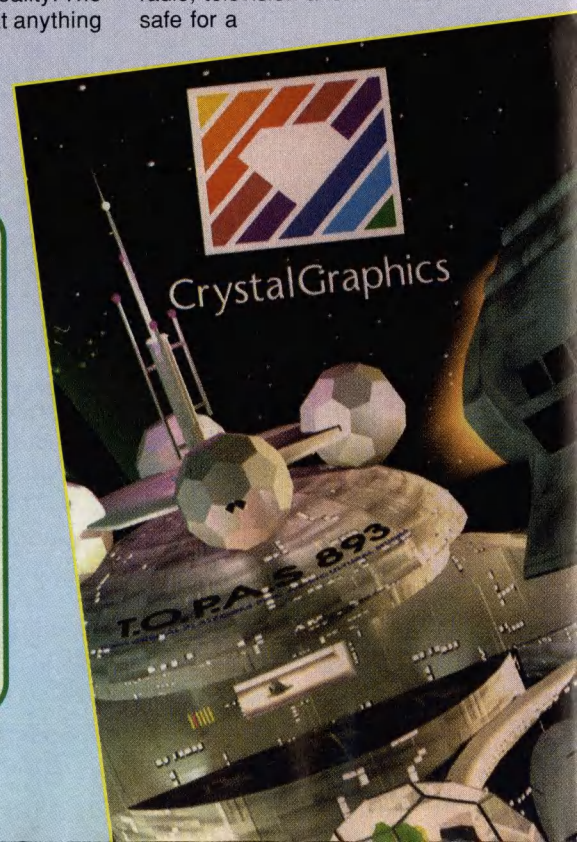
This century, our truth and reality has been presented through the media of photographs, telephones, radio, television and film. We were safe for a

Killing Graphics

Besides some of the more obvious special effects in *Natural Born Killers*, Oliver Stone is said to have wanted a picture on the side of a church which had been filmed - so it was painted in using a computer. But then illusion has always been a fundamental part of movie-making. Back in the Silent days, they were painting backgrounds on glass to save the huge crowds or expensive sets in films like *Ben Hur*. But today the artist is a computer graphics ace and at the touch of a morphing or rendering button can change the whole aspect of a scene completely.



Bending a building with your bare hands.





Grab yourself a piece of virtual reality.

while because tampering could easily be detected. Now, because of advances in computer technology, the viewer struggles to differentiate what is real from what is artificially created.

Like a game of video Chinese whispers, as we move further away from the original source of reality, making a judgement on the artificiality of something will become ever more difficult.

The second, more dramatic impact of computer graphics on our

It started with science fiction...



The Amiga, though maybe overshadowed by other hardware at the main show, starred in a special forum at the Computer Graphics Expo, but also had some points to make of its own to the observant visitor. June Williamson reports.

With early attendance estimated at over seven and a half thousand people, the Computer Graphics Expo was definitely a well supported event.

Even Big Boy Barry and his GamesMaster TV crew were present, although they looked like fish out of water at such a serious event.

Interactive movies, virtual reality and 3D modelling were the buzz words bandied about by 'those in the know'.

Yet the package that impressed me the most specialised in none of these things - Animo by Cambridge Animation Systems.

FantaVision Substitute?

Amiga users may recall FantaVision developed by Broderbund software. This package used vectors in the same way as Animo to create 2D objects which you could then animate by re-positioning them and letting the Amiga generate the in-between frames. As with Animo, you could import a background to set your masterpieces against. FantaVision's one failing, however was that each object could only be one colour, making it very difficult to animate anything but silhouettes.

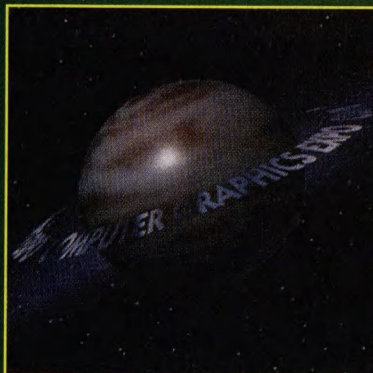
Those with long memories of **AUI** will remember one of the early covers - a woman's face shaped to the form of a cocktail glass - was

created with FantaVision...and a hard job it was to make it work.

Animo, running on a PC, is everything into which Fantavision should have evolved, only without Animo's astronomical asking price of £20,000.

Amiga Name Recogniser

Digital Processing Systems were flaunting the Personal Animation Recorder (PAR) which is already available for the Amiga and has now been launched on the PC market. PAR, one of AUI Best of the Year 1994, enables the recording and real-time playback of computer animation sequences directly from a hard drive.



Transputer

Digital Processing also launched the premier Amiga 3D package, Lightwave, in a version for Windows N.T. Lightwave, as anybody who has not spent the last three or four years trekking in the Himalayas to find Shangri La, is the package used to create special effects for Babylon 5, Robocop and Seaquest DSV along with almost every other television programme in America.

Andy Bishop of PremierVision on the Digital Processing stand used an Amiga A4000/40 with a 040/40 Warp Engine accelerator card to show Lightwave demos. A spinning logo with animated lighting effects was created in minutes.

Andy Bishop hinted that a transputer board would be released soon with a performance of up to 1200mips. Equipped with this board, a high-end Amiga would compare

On a massive screen at the front of the futuristic "Planet Silicon" stand regular demonstrations took viewers through the amazing possibilities of the SGI equipment.

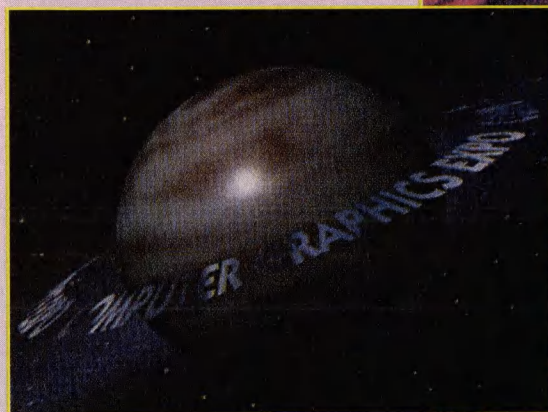
The most impressive use was by city planners in Melbourne, Australia, who recreated the complete inner-city environment on a computer. The simulation helps new drivers navigate their way around the city roads before hitting the mean streets for real. Another practical use of the Reality Engine included in the demonstration was the construction of an oil rig. The structure is planned and assembled using the computer. The 3D environment then allows users to actually 'walk' around and get a feel for how the rig would actually look once built for real.

Practical Use

We are finally seeing practical uses of the technology, rather than for games or military uses. Industry and construction are saving millions of pounds and improving environments because planners can "try out" their designs before building them. Lined up around

the vast "Planet Silicon" stand were more than ten companies using the SGI hardware for gaming, industrial and research purposes.

Entertainment is undoubtedly a big user of the technology. Computer graphic companies were once a little ashamed of that fact, since they



Computer Graphics - The Expo.

wanted their products to have more 'real-life' benefits. They have given in because entertainment is a rapidly expanding and lucrative industry. A large portion of the Planet Silicon was

favourably with Silicon Graphics workstations, and at a significantly reduced cost. The demonstrators were enthusiastic about the Amiga's future and had great respect for its capabilities.

3D and animation were championed by Activa International Ltd, who have now released TVPaint 3 for Windows. TV Paint has long been regarded as an outstanding package on the Amiga and the Amiga version 3.0 is currently being beta-tested, so will be released shortly. Release dates can be obtained from Andy Jones on 081-402-5770 or call the Activa BBS on 081-986-5964.

Wavefront unveiled Dynamation 2.0 for SGI workstations. It claims to break new ground by letting animators control physical events with forces rather than key frames. Amiga owners know that Real 3D has been able to do this since version 2.0!

Communication Arts launched Cinebase - a graphical database. Claimed to be the only commercial product of its kind (Ramiga couldn't locate a comparable programme on the Amiga), it features a simple point and click interface to sort, cross-reference, categorise and group images whether movie scenes, stills, archived x-rays or any digital media.



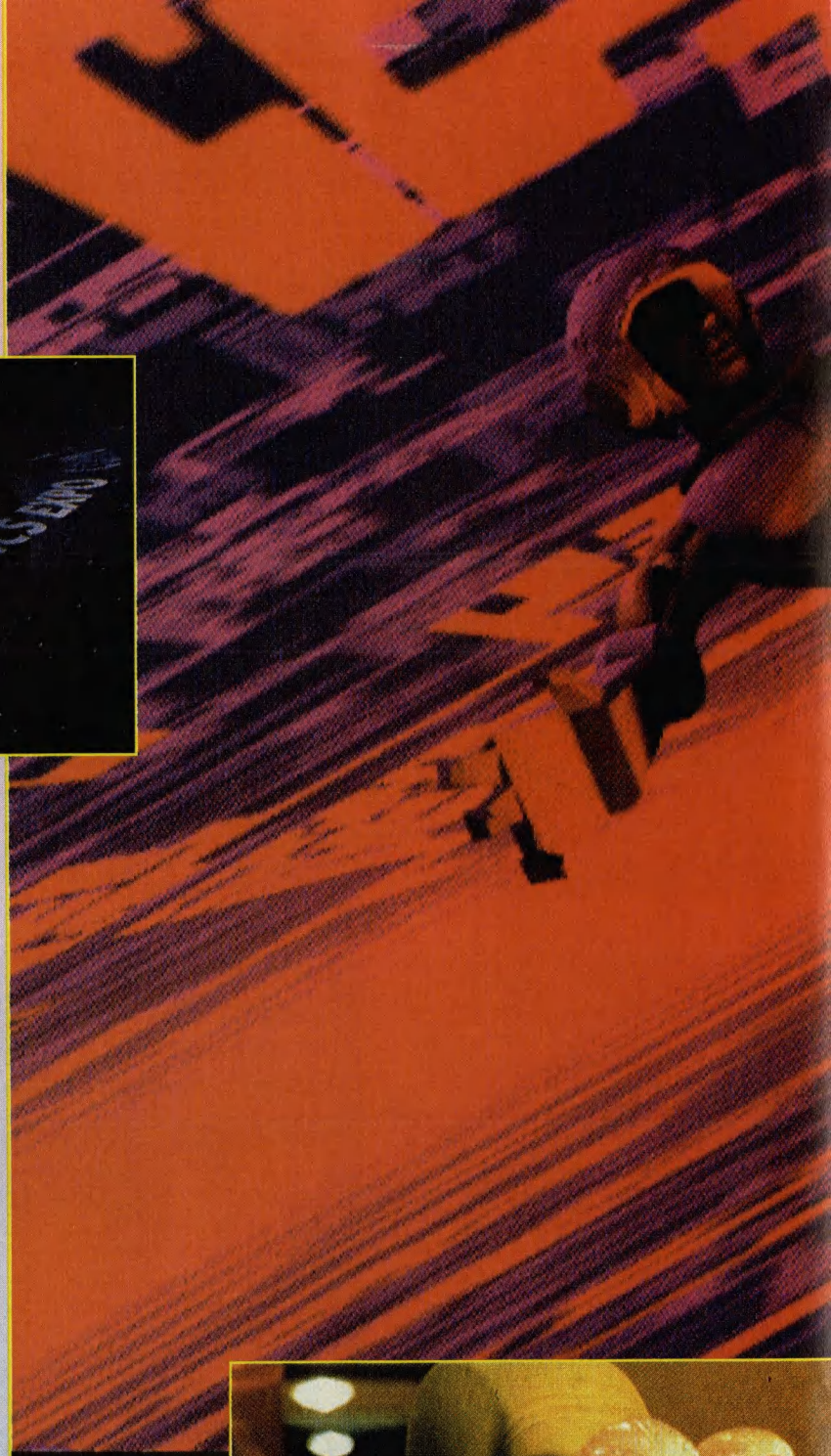
should have already made its mark on the Amiga world.

The Expo showed very little that was new, but it was heartening to see the Amiga still up with or even ahead of the heavy-weights.

If you are interested in computer-based presentation, get hold of a useful booklet - "The Reflex Guide to Presentation Systems for Professionals" - from Reflex on 0734-313611.

Games companies were thin on the ground, although notable exceptions included Amiga favourites Ocean, Psygnosis and Microprose.

Ocean were parading their very hyped release, Inferno - The Odyssey Continues, but unfortunately confirmed that it will not be appearing on the Amiga. As you read this though, Rise of the Robots, from Mirage,



Computer graphics have transformed games... but into what?

thereforE dedicated to entertainment. Not only have fun parks been using the technology to design rides, but the resulting computer-generated visuals have raised the prospect of some very impressive computer 'rides'. Riders will be strapped into machinery which moves in unison with the visuals on the screen. The resulting ride may be as thrilling as the real thing.

The usual line-up of Virtual Reality nuts was displaying its wares



Gobsmacked by the computer graphics effects for The Mask.

again, including an interesting indoor ski kit. Wearing a belt that senses balance, and gripping pole handles, the user mimics the skiing technique to maneuver a VR person down a slope.

and other movies which used their animator for some incredible effects. The most famous name user of Poweranimator is the leading effects production house, Industrial Light and Magic.

Media companies are combining technology and software to meet

their needs. A number of different technology companies were claiming credit for effects in the same films.

Parallax displayed an array of interconnecting systems for digital effects composition and painting, including Advance and Matador.

Microsoft had a bright stand for "SOFTIMAGE", claiming credit for The Mask, Sega's Virtua Fighter, and the Asterix in America cartoon.

IBM had a large stand showing their new RISC system 6000 and the "ground-breaking" OS/2 Warp software.

The use of advanced computer graphics in games is well documented. Sales Curve Interactive (SCI)

were revealing Cyberwar to those who poked their heads around the door and Mirage Technology proved their much vaunted "Rise of the Robots" is no longer a mirage. The Amiga was claimed on the list of platforms for which "Rise" was being produced.

Amiga Where?

So where was the Amiga at the Computer Graphics Expo? An Amiga 4000 was showing demos at a forum, but I'm afraid it was little in evidence elsewhere. Amiga technology could knock the socks off some of the stuff shown proudly at the Expo, it would also do it at half the price.

Amiga users are well aware that they can compete admirably in the computer graphics field, at least in quality if not in speed. There are a number of production houses around the world using Amigas alone or alongside other platforms. Yet unless the Amiga is seen to be doing the job, it will be increasingly marginalised. **AUI**

The result has been for technology to dictate the themes, plots and action on our TV and cinema screens. The 'unreality' of computer graphics is hip.



Martha - not another computer-generated animation!

The display from Transformation Software, based unsurprisingly on a Silicon Graphics computer, highlighted the one major problem that persists with VR - the lack of a tactile environment. The ungainly swaying and vain arm pumping of people enticed to give the game a go showed that it is still hard to interact with a computer-generated reality.

An unashamedly artificial and non-interactive environment is the world of cartoons. Computers are transforming the cartooning process. Animo from Cambridge Animation Systems computerises all the processes from in-betweening and painting to camera work and the final digital master. Although the artist can draw cartoons using the system, Animo will also take scanned sketch drawings, which can then be painted. The sys-

tem is cartoon-intelligent. It understands the requirements of frame-by-frame work. The artist can define the colours of a character in one frame and Animo will automatically paint Games

The Nintendo stand puzzled me. It consisted only of five game modules of Donkey Kong Country, and some bored looking attendants. I

found at a nearby stand run by Alias, that Donkey Kong Country is claimed to be the first fully rendered animation game ever.

Although the Alias Poweranimator system rendered Donkey Kong Country, Alias had much more impressive examples of their system. They showed memorable scenes from Aliens, True Lies, Flintstones, Mask

Christmas Deals from Digital Direct



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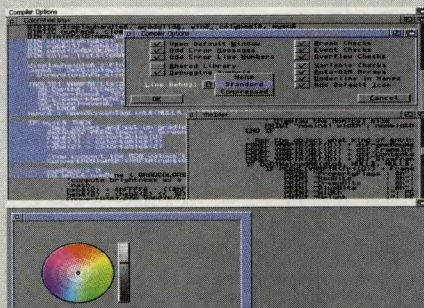
Programming

HiSoft BASIC 2

HiSoft BASIC 2 is the new BASIC system for your Amiga, fully compatible with all Amigas from a Workbench 1.3 A500 up to an A4000 tower system running Workbench 3.

This exciting package sets new standards for BASIC programmers on the Amiga with full AGA and Workbench 3 support through the use of extensive and complete libraries.

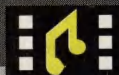
This is the system for those who want to program real applications and utilities on their computer - a professional BASIC interactive compiler with an easy-to-use, multi-window editor and medium level debugger, producing super-fast, compact code in memory (for testing) or direct to disk.



The HiSoft BASIC 2 package runs on all Amigas with 1Mb of memory or more and includes an extensive, 640-page user manual with tutorials, many examples and a complete reference section.

Upgrades are available from HiSoft BASIC version 1 and Power BASIC - please call for details.

Get the Amiga BASIC of the 90s today!



Video/Presentation

VIDEOMASTER



The best-value real-time video digitiser you can buy; VideoMaster gives you the ability to record real-time monochrome video with sound at 25 frames per second as well as quality full-screen stills from your camcorder or video recorder. VideoMaster RGB includes our new colour splitter, ColourMaster, and produces amazing quality colour stills.

VideoMaster AGA works on the A1200 and A600, connects via the PCMCIA slot for extra speed and freedom to use other peripherals, allows high quality stereo sound and supports HAM6 and HAM8 up to 640 x 512 resolution for stills.



ColourMaster

ColourMaster is a new electronic colour splitter which works in conjunction with VideoMaster for stunning colour stills.

VideoStage Pro

Spectacular video and on-screen interactive productions are easily created with this brand-new release from Oxix. Shows can incorporate text, graphic objects, animated sequences and sound.

The Storyboard features icons for insertion of show events such as graphic images, title screens, sound events, ARexx calls, genlock events and play loop events; a Timeline allows different tracks for each of these.

Videostage Pro supports the concept of Actors allowing animation of any drawn object, button or brush and actors may be overlapped in their motion so that multiple objects move at the same time, for smoothness.

The Genlock control supports G-Lock and SuperGen genlocks as well as all generic Amiga genlock controls. Sound support for 8SVX samples and NoiseTracker, ProTracker and SoundTracker music modules.

Over 60 built-in dazzling Special Effects with wipes, fades, scrolls, cross-fades etc.

Videostage Pro requires an Amiga with a hard disk and 3Mb RAM (at least 1Mb chip RAM). AmigaDOS 2.0 or higher.

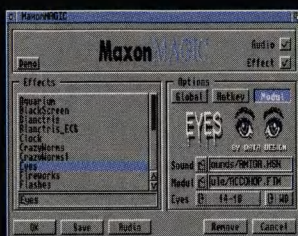


Utilities

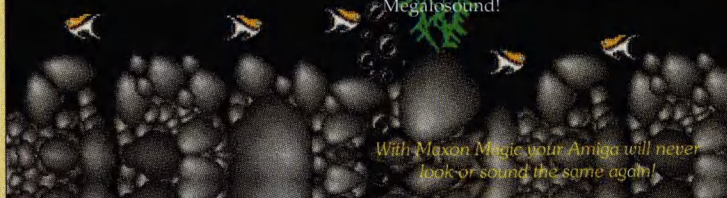
Maxon Magic

The Maxon Magic screen saver works in all modes, even with graphic cards, and offers you a choice of 20 different amusing and entertaining modules such as Aquarium, Flying Breakfast, Fireworks, Crazy Worms, Messages, Clock etc.

As if that isn't enough value for money, Maxon Magic also lets you assign sounds to most system events including Window/Screen open & close events, Alerts, Keys, Mouse clicks, Requesters and more. Choose from the many sounds provided or simply use your own sampled IFFs, created with a sound sampler such as Megaloud!



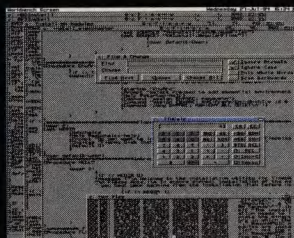
This is the utility that you simply must own! Maxon Magic is a fantastic combination of 20 different animated screen savers, a system event sound manager and many amusing sampled sounds that will not only be incredibly useful but will give you and your friends endless enjoyment as well.



With Maxon Magic your Amiga will never look or sound the same again!

TurboText

Unparalleled performance, ease-of-use & elegance make TurboText the editor of choice for serious Amiga users.



The flexible environment enables you to emulate any other text editor or to create your own by customising the menus, function keys and keyboard shortcuts. Everything you want is here from sophisticated cut/copy/paste through text templates up to ARexx support and outlining/folding. There's even an integrated hexadecimal editing window and a built-in calculator!

TurboText is hailed by many as the most advanced editor for the Amiga and works on all Amigas from the A500 up to the mighty A4000.



Simulation

ProFlight

The classic Tornado simulator that works on all Amiga computers and provides maximum realism while being tremendous fun to play.

ProFlight is one of the most accurate, and therefore most flyable, aircraft simulators currently available for home computers - everything is there from the correct effect of the tailerons, elevators and rudder through complete navigational aids with auto-pilot up to sophisticated weaponry such as Sidewinder missiles and fly-to-line bombs. The accuracy of flight is top-notch, try this test with your other favourite simulator - turn the aircraft on its wing tips; most will continue to fly straight and level - the ProFlight Tornado will lose altitude, just like the real thing.



ProFlight comes complete with a professional, ring-bound, 190-page flight manual detailing all aspects of flying this exciting aircraft including a full tutorial and a history of the Tornado with archive photographs.

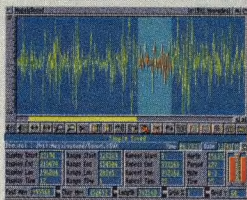
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Music Samplers etc.

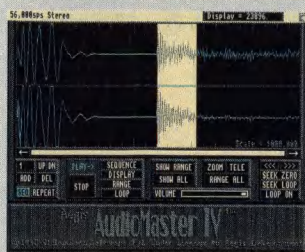


Megalosound is the new 8-bit, stereo, direct-to-disk sampler package; the software is packed full of easy-to-use editing features, special effects and extras such as the ability to print waveforms and sample information.

The package allows sampling up to 84KHz mono and 56KHz stereo to memory and up to 21KHz stereo to hard disk on an A1200. Supplied with a hardware volume control and an extensive 144-page manual, Megalosound is impressive value and Gold-rated by CU Amiga, with 89% from everybody's favourite magazine, Amiga Format!

ProMIDI Interface

The ideal MIDI interface for all Amigas, this smart-looking device comes with MIDI in, MIDI thru and two MIDI out ports and is complete with manual, software and a flying cable for convenient positioning.



AudioMaster IV is regarded as the de-facto standard in sound sampling and editing software. With its incredible range of features and clear, informative displays, it is hard to beat as a sound editing system.

AudioMaster IV is compatible with Megalosound and any other sound sampling hardware that connects through the Amiga's parallel port.



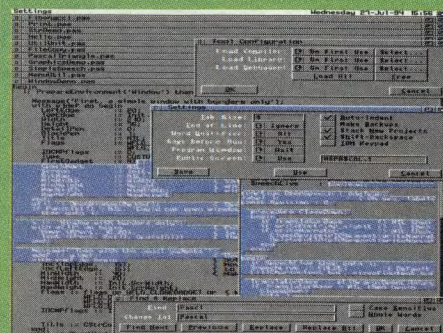
Programming

HighSpeed Pascal

HighSpeed Pascal is the only commercial Pascal compiler available for the Amiga and is a joy to use. Featuring Turbo Pascal 5™ compatibility, a multi-window editing environment, incredibly-fast compilation speed (to memory or to disk), an integrated make utility for project management, complete Turbo Pascal units (Workbench 2 enhanced and Workbench 3 compatible) and much, much more, this is the package for anyone interested in structured programming on the Amiga.

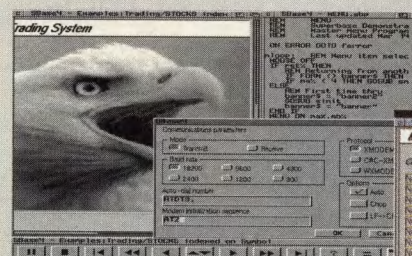
HiSoft Devpac 3

Devpac 3 is the standard assembler development system on the Amiga. Gold-rated by virtually all the magazines, the package includes a 68000-68040 assembler, a fast linker, an integrated debugger and all with more features than most people will ever need. Complete with informative manual.



Business Applications

SBase 4



We are pleased to announce that SBase 4 is back in the UK with Digital Direct. SBase 4 Personal and SBase 4 Professional are up to version 1.3n now and we have both in stock, ready for immediate despatch.

These products are renowned for their power and their range of features and have been available on the Amiga platform for many years in earlier versions. Now they have both been brought right up-to-date with support for the very latest Amiga computers.

Both SBase Personal and Professional are full-featured, fully relational and powerful databases with pull-down menus, multiple windows and complete access to your Amiga's multi-tasking environment and they are now compatible with AmigaDOS 3.0 and the AGA chip set.

SBase Professional includes a powerful database management language and supports AReXX. Please call for our datasheets on these superb products.

Graphic Design

VistaLite 3.0

Create stunning landscapes with this amazing 3D simulation program. Supports HAM8 and 256 colour mode and requires 2Mb of RAM and Workbench 2.0 or above. A simply superb product from Virtual Reality Labs!



Pricing & Ordering Details

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HighSpeed Pascal 1.10	£49	ProMIDI interface	£17
Maxon Magic	£22	VistaLite 3.0	£29
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VideoStage Pro	£99	K-Spread2/K-Data Pack	£10
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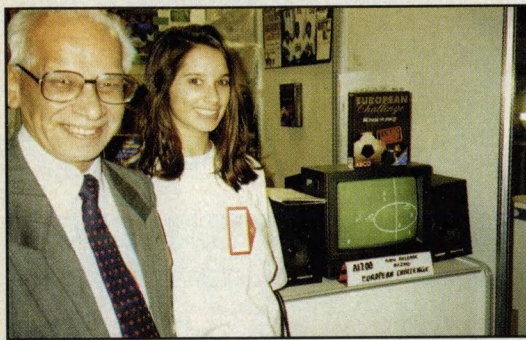
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Showing

The

Reports of the Amiga's death have been greatly exaggerated was clearly the message coming out of the World of Amiga Show. Mark Blackham and Anthony Mael bring back the good tidings.



Anco's Anil Gupta plus attractive daughter proudly launched a European Challenge.



Want to take the Amiga for ride?

Other new accelerators for the A1200 include DKB's Cobra (O30 at 28MHz) and Mongoose, at Ramiga International's crowded base at the Show.



Silica has them shopping.

Some sceptical computer smart alecs may have derided the Show before it began but the enthusiastic crowd proved there is plenty of life left in the Amiga even if this, with its future in the balance, was an odd moment to try and demonstrate just strong a computer it is.

At the **AUI** stand, where our illustrious staff posed for photos taken by star-struck fans, the **AUI** back-issues service did a roaring trade, with great demand especially for the historic CD issues.

Many exhibitors were there to clear stock, others were there to clear any impression people may have that developers are slowing down their Amiga work. An exciting range of recently released hardware and software was being promoted and demonstrated. Much of it is aimed at the serious Amiga user, although kit intended to improve standard systems was in abundance.

Accelerators

Accelerators were the equipment on everyone's crumpled Xmas list at the Show, and they had plenty from which to choose. With accelerators almost becoming a standard addition for serious Amiga

Other new accelerators for the A1200 include DKB's Cobra (O30 at 28MHz) and Mongoose, at Ramiga International's crowded base at the Show and Power Computing's Viper series.

Harwoods' were also promoting the new Cyberstorm 040/060 accelerator for those A4000 owners embarrassed that their smaller A1200 cousins are catching up in speed through a healthy range of their own accelerators. Cyberstorm is said to increase the A4000 040 performance by up to four times, and enhance the O30 version by more than 10 times. Today that type of processing power is considered vital by many top end Amiga users in the computer graphics industry and other fields.

AUI learned at the Show of a powerful graphics and video computer, DraCO. Based on the 68060, this professional computer uses the Amiga OS and is claimed to be independent of the Commodore custom chip set. That means DraCO has the power of an Amiga, will run LightWave, AdPro, Image F/X etc, but is not dependant on Commodore's possibly dimming light. DraCO, from MacroSystems in Germany, could well be a major factor in the Amiga's high end future.

Top Level

Although Amiga devotees, not counting the games fanatics, at the Show fell into two groups - hobbyist and power users, all were impressed by the top-level products being demonstrated. They were wowed by the Cybervision 64-bit graphics board, the Ramiga Tower Systems (7 zorro III slots, 2 video slots and 5 PC slots for the A4000) and the Raptor Plus rendering engine.

The class of the Amiga was highlighted with products like the OpalVision video processor. A beta-test version was being displayed at the show by White Knight Technology for the first time in the UK.

Image processing is big business. The newly-launched Photogenics package was being presented by Almathera in the crowded exhibition theatre. Photogenics power is available even on the humble A1200 (albeit requiring extra RAM and accelerator/maths co-processor to churn through the calculations).

Almathera told **AUI** that Photogenics is the first commercially available image and paint program to work solely on WB3.0. It fully utilises the

users, and selling strongly at the Show, it is vital that software manufacturers ensure their products run on the faster Amiga systems. Those acquiring their accelerators for the first time may well be disappointed to see their favourite software still sometimes refuse to work.

Despite rumours of the demise of GVP, the long-renowned GVP Turbo II system was still present at the Silica's stand, but newer accelerators are competing for any loose cash. Gordon Harwood Computers were promoting their new, cheekily-named, Blizzard Turbo III. This range is doing so well that it could assume the "Turbo" name which had almost become synonymous with accelerators. The accelerator and memory board is claimed to be the highest performing 68030 for the A1200.



Having a heatwave - software for those who prefer adult games.

Flag

hardware - making real airbrushes (hard centre, soft to the edge), watercolours, pencil, crayon and pastels available to the computer artist. The program even lets you rub out work to reveal paint or pictures underneath, or change colours already painted.

PPaint Sterograms

Ramiga International were flexing the well-known muscles of LightWave, and trying to punch a way into the well-populated paint package market for the highly regarded Personal Paint now into version V6.1. Michele Battle, of Cloanto the creators of PPaint was at the Show happily telling the world of PPaint 6.1's ability to make up the fashionable Stereograms which probably no other Amiga paint package of its class can achieve. Ramiga, PPaint's UK distributors, were offering some very good deals on upgrades to previous versions of Personal Paint, one of which was covermounted on **AUI** last year.

The hyper-busy Conal Wenn ("Yeah, I can book you in for lunch in March next year") of Image-Nation was hawking his professional video work for corporates and advertising - all completed on A4000s.

DPS were yet again showing off the Personal Animation Recorder - which brought the wonder of computer assisted animation to millions of people through the Oscar-winning movie "Wrong Trousers".

It's high-end, broadcast quality, graphic video products and the artists that use them that are keeping the Amiga flag flying.

DOpus Surprise

The bulk of Amiga users at the Show were treated to a one-stop display of the impressive uses of their favourite machine. Many of those were possible with the freeing up of only a small part of your wallet. Those who could not leave their beloved A500 or 2000 were heartened by the appearance of the new operating system ROM pack V3.1 (also available for the A4000).

One of the biggest surprises of the Show had to be Directory Opus 5, which was present in a beta version. They said they had decided to upgrade completely the image and approach the idea of file management from a different angle. They've managed it. It will now open either on Workbench or on its own screen. Each volume and directory will open

its own window with a set of command icons. As in earlier versions, the buttons and actions can be configured to your needs. In a leap forward, you can now have multiple sources and destinations. No more will we be tied to two lonely windows! Although only a late alpha version, it's very promising. Interestingly it's no longer coming out through Innovatronics. Look out for a full review soon!

Digita had their latest line up of quality products; the working Wordworth 3.1 / SE, the new Datastore and Money Manager V.3.

Softwood are serious competitors, and they were proudly displaying their superb Final Writer and Final Copy.

It's high-end, broadcast quality, graphic video products and the artists that use them that are keeping the Amiga flag flying.

Dime A Dozen

Games and productivity software were in dime-a-dozen abundance, and the PD-houses copied out their catalogues on the spot.

New games like Cannon Fodder 2, Kick Off 3 - European Challenge, Premier Manager 3, Shadow Fighter, Super Stardust and Alien Breed (Tower Assault) were snapped up. And the many games players still loyal to the Amiga had the chance to try them out in the central games arcade.

Harwoods had the great Pro-GRAB 24RT hardware - top level 24-bit real time colour frame grabber and digitiser, with Teletext!

Making music on the Amiga is a favourite pastime of many at the Show judging by the level of interest shown in products like ProMidi Interface and MegaloSound from Hi-Soft.

The Comms world has exploded into mammoth trendy proportions, so there was a large range of modems including some magic ones from Wizard Developments, now run by ex-Silica technowiz Sean Cosgrove.

CD-ROMS have definitely arrived as the storage medium of the nineties. Hi Soft had a very nippy Squirrel SCSI SuperTriple CD-ROM drive. Silica were said to be very happy with sales of their CD32 bundle, "Critical Zone".

Paradox

A surprisingly large number of Amiga users don't have hard drives, or are looking to upgrade from their current small capacity drives. The Show confirmed that 3.5" hard drives have finally caught on, as predicted by **AUI**, as a safe, cheap and powerful option, with many being available from Show exhibitors.

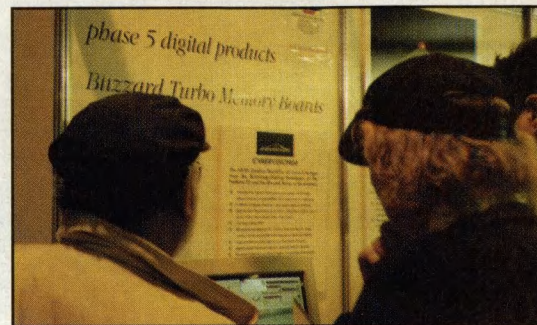
The overall range of products, certainly for those who are serious about their Amigas, at the Show was probably better value than at any time in the Amiga's ten year history. Higher specifications, more power, better engineering, lower prices, it seemed strange that hardly any Amigas have been produced for nearly a year and the threat of extinction lay over the computer.

The Amiga has always been something of a

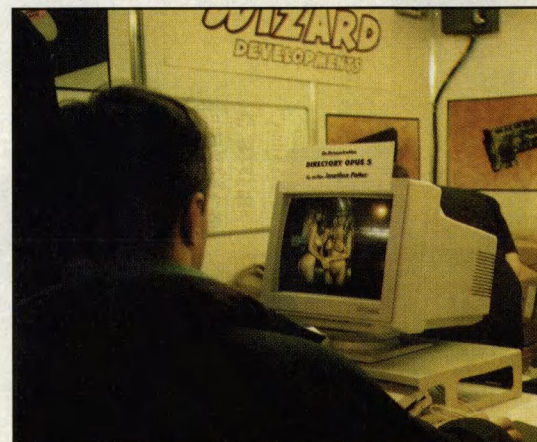
CONTINUED ON PAGE 54 ►



Crowd them in and sell them cheap.



Harwoods showing a Blizzard.



And Wizard showed a surprising Opus.



Always there helping the users - ICPUG.



Optonica launched the Nexus range.

EPIC SOFTWARE



A Virus killer is an essential purchase in these days where there are hundreds of Amiga viruses. Make sure your software collection is free from all known viruses.

£4.00

VIP4-2. VIRUS KILLERS



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BDK6-3. KOMBAT



Who needs Sonic or Mario when you can play fantastic games like this on your Amiga. Fast, smooth scrolling platform game. Excellent stuff.

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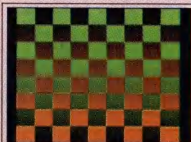
MSB5-1. MORTON STRIKES BACK



Now the summer's here, it's time to do the garden, and this is a good reason not to, because you'll be too busy designing it.

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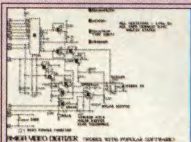
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All for only £15.00

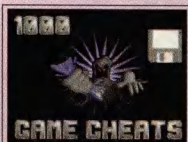
RSM15-5. RSI DEMO MAKER



Features all you need to crunch, archive & decrunch any file or disk. Includes DMS the Disk masher, Powerpacker, LHA etc.

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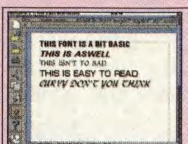
QUZ5-2. QUIZ MASTER



Run PC software on your Amiga. Supports VGA on the A1200 or A4000 works with your Hard Disk, Floppy Drive, Serial, Parallel & mouse ports.

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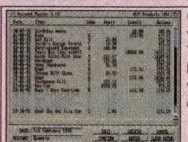
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The most professional word search, crossword solver available on the Amiga. Includes a dictionary of over 58,000 words, and you can add your own.

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WFP5-2. WORD FINDER PRO.



If you're new to the Amiga, then you may be having problems with missing Libraries on your workbench that are needed to run particular software. Order this now and solve those problems.

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EFB2-1. ESSENTIAL FOR BEGINNERS



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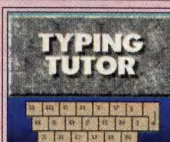
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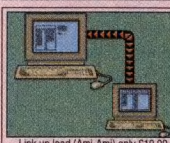
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BRT90-1. BRILLIANCE 2

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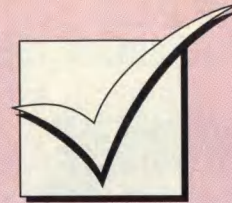
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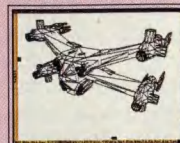
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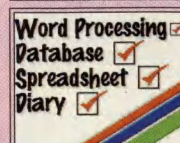
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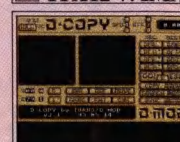
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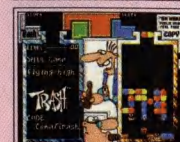
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Contains a selection of Video titlers, Video wipes & backdrops. Great for creating professional home movies. All you need.

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If you've just purchased your Amiga you may be a bit boggled how to use it properly. Well this five disk set takes you step by step through every basic thing to know.

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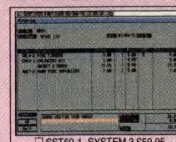
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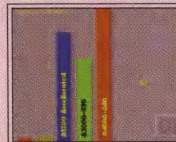
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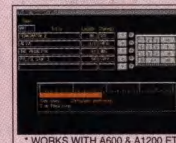
Features 4 all time classics. New & old versions of Pacman, Space Invaders, Asteroids and Galaxians. Remember the good old days for now only £10.00.



An essential tool for installing workbench on your new hard disk. Easy to use either on the A600 or A1200.

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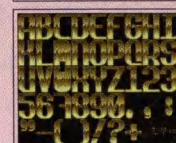
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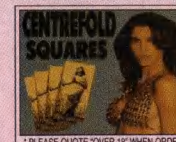
SBL4-2. NINE FINGERS



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Whether you're a complete beginner at chess or a champion, J1 CHESS has something for you. Superb graphics and speech make this a great software title.

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Williams F1 Imagine object. It requires 4 meg but as you can see is Amazing. Requires a version of Imagine to render it.

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A collection of great fun educational games for children aged 7+. Maths, spelling, speed, etc. are all included in this excellent compilation.

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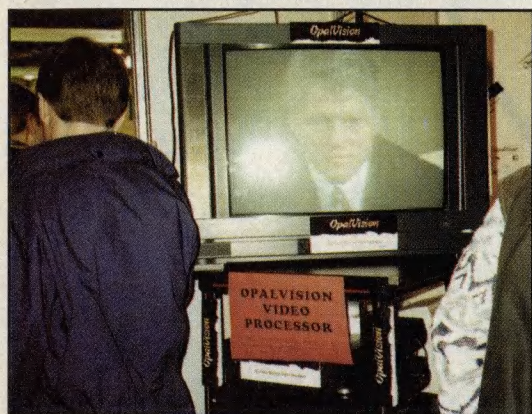
PASSWORD ENCRYPTOR PSW10-4. PASSWORD

Showing The Flag

◀ CONTINUED FROM PAGE 50



All the fun of the Fair?



Distinguished and long awaited visitor - OpalVision Video.



German visitor Villagetrionic.

Shows are ideal for anyone looking to pick up a useful piece of software or even a long-desired hardware add-on.



AUI's stand for those who took their Amiga seriously.

paradox, masquerading as a games machine when really it can easily be a powerhouse of workstation.

Problem Unresolved

Commodore UK staff, who had worked hard to put the Show together were there in force. Unsurprisingly, they looked tired and stressed but were putting a good face on their difficult situation which at the time of going to press of this magazine was still unresolved.

They had been putting all their energies into pushing the Show hard as a must for all those involved in the Amiga. They rightly judged that the Show would be a boost for morale which surely needed an injection of something tangible for the Amiga world to hold onto after so many months of uncertainty over Commodore's or more correctly, the Amiga's future.

The general agreement, especially among exhibitors, was that the still remaining staff at CBM UK had done the right thing by promoting the Show at this time. It gave a revived feeling of hope and, as was commented, a sense that, in the classic Mark Twain phrase, rumours of the Amiga's death had been greatly exaggerated.

Their efforts were helped by there existing such a strong sense of goodwill toward the Amiga even if so many people still seemed keen to express the view that CBM as an international company had brought its problems on itself.

Big Players

One of the good things about a Show like this, for the Amiga public, is the opportunity to speak personally with the big players in the Amiga world. David

With the stands less brash, the products are rightly the centre of attention.

Pleasant and Colin Proudfoot the joint MDs of Commodore UK and leaders of the potential buyout made themselves available for direct access by any Amiga user who wanted to ask, and hundreds did, just what was happening to the Amiga.

Other notables who were in popular demand for their expert knowledge and advice were people like Bill Owen of Ramiga International, Jeremy Rihill of Digita, Paul and Jolyon Ralph of Almathera and Paul Leser of Blittersoft.

Even on AUI's own stand there was constant flow of readers who wanted to comment on the magazine, fortunately in mostly complimentary terms, and to talk to the names they know through the magazine as providing information and entertainment month after month.

One reader complained that he couldn't run the coverdisks. We were prepared to turn to Andy Eskelson until we learned that the trouble was that the visitor had still a 1.2 level Amiga. It was pointed out to him that we were only responsible for putting the programs on our Coverdisks and the real problem was that so few programs were being written for anything other than the 2.0 and above.

At which he complained that upgrading would cost £80 but then said what we really needed to do was bring out AUI in Chinese! We had to tell him that at the moment there no plans for that!

Hammered

One set of Amiga users who weren't very happy were the developers who had a conference of their own at the Show. We will carry a full report on that conference in the next issue of AUI but what emerged, according a senior CBM source, was that "They hammered us." Apparently they complained about everything, especially lack of "support".

It's not surprising that the developers, as those whose risk is greatest if the Amiga's problems are not quickly solved, should be deeply concerned. Should we start - even continue - projects? That was the clear message that came across. But it wasn't a question that CBM UK could answer however much they would have wanted to. One observer commented that the somewhat aggressive tone of the developers' attitude was a natural expression of their own insecurity and frustration more than a real attack on the probably equally frustrated people in CBM UK.

Some people hungered for the delights of the DPS stand.



CONTINUED ON PAGE 112 ▶

There are a lot of people here and plenty of stands, said one exhibitor wonderingly. He spoke as if he had expected to see the cavernous Wembley Exhibition Centre occupied by a few depressed visitors wandering in acres of empty space.

He was wrong. But his attitude is perhaps typical of those "in the Amiga business" who in many ways mistakenly feel that Commodore's problems radically affect the Amiga community. Most people who attend shows already have their machine so the problems of the manufacturer will not really concern them, except indirectly.

There were, in fact, plenty of people at the Show and many stands were often very crowded. True, the World of Amiga was by no means as huge as World of Commodore had been in the past. But that had its advantages. There was little sign of the blaringly noisy flash constructions that the games companies felt at one time that they had to build to persuade the punters of the playability of their products. Many of us never believed that the con trick worked. Instead now with the stands less brash, the products are rightly the centre of attention. And there were plenty of people who came to see them and who seemed to have found the trip to north London well worthwhile.

Virtual Worlds

**Martin Witton
led the AUI
team into an
exploration of
what is
happening not
tomorrow but
right now in
the
accelerating
world of
Virtual
Reality.**

If your mind isn't boggled by how near the virtual world is coming to invading our own "real" world...well, you're probably already professionally involved in VR. This is the most complete "Virtual Worlds" report published so far - at least in a computer magazine. It contains some astonishing findings. One thing we found in our investigation of the VR scene was that the obvious entertainment side, the arcades and the much-hyped home user potential, is just the bare tip of the VR iceberg. Are you feeling virtual cold thrills up and down your spine? VR is happening everywhere. As you will see from the coverage about medicine, design, engineering and other areas where VR applications are being used, what was thought of as vaguely sci-fi amusement is fast turning into a very practical tool for

the benefit of humanity. Not too many technological innovations can claim that at such an early stage in their development.

The Amiga, mainly through the company that used to be called W Industries but is now Virtuality Limited, has had a role in the beginning of the development of VR. Sadly that part seems now to be, no pun intended, virtually over. The powerful PC lobby led by IBM have once again pushed ahead. Perhaps with a RISC chip on board the Amiga might emerge again as a force in this growing field.

Whether it does or not, and whether we as Amiga users like it or not, the VR world is going to move on. It is going to invade all our lives with increasingly "real" applications. Is there a danger in that invasion? Yes, of course there is. If you remember the Yul Brynner character in the film

"Westworld" you might think the danger lies when the reality of virtual worlds takes on a threatening form through some breakdown in the technology. But there may be an even more pernicious effect of "immersion" in a virtual world; the loss of contact with the "real world". It wouldn't be surprising, when for so many of us, reality is very hard to stand. Would taking refuge in a less troubled and troubling virtual world be an attractive answer? Would it be so different from alcohol or drugs in producing a replacement for unpleasant reality in an enjoyable virtual fantasy?

We know the effects of drink and drugs but do we know the results of exposure to the unlimited potential of virtual worlds? No we don't yet. But if the information contained in this Virtual Worlds Report is anything to go by, we soon shall . . .



Virtual REAL

The Future Is HERE!

Put on your head set and take off your conscience to the world of virtuality. AUI brings you the latest, the best and the fantastic for you to feast yourselves on the excesses of the virtual reality developments.

What is it? Does it work? Is it for you?

All you need to know about the serious and not so serious use of this weird and wonderful technology.

WHAT IS VIRTUAL REALITY

Just to make sure we are on the same wavelength, we need to check out what we mean by VR.

Mindscape, the games company, defines Virtual Reality (VR) as "the medium which provides participative three dimensional visualisation and simulation of virtual worlds; the virtual world being the fundamental component of a virtual reality system".

This is very different from traditional animation.

Ordinary animations rely on the displayed images being previously created. This sequence of images is stored for replaying at a later time. So it's worth realising that viewing an animation is a passive experience as opposed to the experience in which you participate provided by a virtual reality system.

ple now associate with virtual reality. But if you thought that virtual reality was simply another form of entertainment with an added dimension, think again!

Self indulgence and gratification are not the sole reasons for "Boldly Going". The primitive urges which drive us on to satisfy our physical, mental and social needs enable us to adapt our discoveries to all areas of development. And so it is with VR. Take a look at the range of applications of virtual reality - from education to medicine, design, and business, for training and safety uses and not least in research. All these areas are experiencing and benefiting from the invasion of VR.

VR SYSTEMS

All virtual reality systems have five key elements.

1 Virtual World. This is an interactive environment which can be viewed and examined continuously from any perspective. It is specifically a database containing the definition of a 3D model or environment.

2 VR Software. This provides the ability to view and participate in the virtual worlds in real time. Development virtual reality software is used to create virtual worlds. This includes facilities

to model objects, colour them, apply dynamics and assign behaviours.

3 A computer. (Yes, an Amiga will do fine.)

4 Input Devices. These devices are used to affect the operator's view of virtual worlds. They can also be used to build the virtual world. Examples include mice, joysticks and trackballs.

5 Output Devices. Visual output devices will display the current view of the virtual world. These include desktop (i.e. computer monitor) mainly used for business applications, or immersive devices (i.e. head mounted displays) which are commonly found in entertainment or some marketing applications. It is the choice of visual output device used to view the virtual world which classifies a system as desktop or immersive.

The Virtual Background

Just as the life force drives men to 'spread their seed' and women to indulge in their maternal instincts to carry on the race, so too has the need for mind expansion and exploration been part of primal human urges. Such desires can be satisfied in numerous ways, physically or in fantasy. Somewhere, someone right now is out there pushing themselves to the limits, climbing Mount Everest or Boldly going where No Man Has Gone Before. But most people seek their life expanding experiences in the comfort of their own homes - through books, films, TV or even in taking the mind to its limits with drugs.

Two dimensional experiences only whet the appetite for more. Do you remember going to the cinema (I forget which film it was) where the audience was given a pair of cardboard specs to see parts of the film in 3D? (It was "The House of Wax" ED.)

Perhaps those specs were the forerunner to the headsets most peo-

THE PROCESS

The process of participating in a virtual world begins by activating an input device. This is then interpreted by the VR software which updates the virtual world and the objects within it. The VR software calculates the 3D view of the virtual world and transfers this new view together with any other information, such as sound, to the output devices so the effect can be seen. This process takes place many times, millions of times, every second.

SERIOUSLY USEFUL VR

TV

Telepresence

InfoDisp has a range of Information Delivery Systems for the mobile worker. CamNet is a Telepresence System which provides audio, visual and graphical communication internationally. Applications include teleworking which offers a company's expertise to anywhere in the world, such as remote maintenance, installation or inspection.

In CamNet, an Audiovisual Headset is used to give the feeling of

telepresence - the sense of physical presence that can be experienced when viewing a remote scene over a videolink. The headset consists of a microphone, earphones, miniature video camera and the Private Eye head up display. The person at the end of the link, the expert, sees precisely what the user of the headset is seeing and can communicate with the user verbally. In addition the expert can send drawings, diagrams, images and data to the user's Private Eye display screen.

Defence

Westland System Assessment Ltd is an independent company within the Westland helicopter group. This company is using virtual reality to support all its business activities, with particular emphasis in the development of both military and civil applications using Superscape. In the military sector, Superscape software is being used as a sales and marketing tool for planning aids, training and concept visualisation.

SYNTHESPIAN

- A new definition... a computer generated actor who promises to bring virtual reality to a screen near you. Hollywood has taken to such special effects as they provide cheaper, safer and less temperamental alternatives to real actors and stunt people. Also known as 'vactors' - virtual actors.**

Virtual Arts

The Guggenheim Museum of New York recently presented Carl Loeffler's Virtual Museum as one of six exhibits in a ten day sold out show - Virtual Reality (funded by Intel). The virtual art world of Carl Loeffler is a networked virtual art museum, an immersive interactive cyberspatial system that lets people explore the creations of distant and ancient cultures.

Loeffler is now working on the combination of VR and high-bandwidth networks to create an interconnected siteless museum accessible around the world. With modems and VR gear, people will access virtual 3-D art spaces on a global network. Artists will be invited to create and install artworks using the on-line tool room. Guest curators will organise exhibitions, commission works and "espouse critical theory pertaining to VR and cultural expression." Wow!

VIRTUAL THEATRE

Sun Microsystems has developed a virtual reality model of Shakespeare's Globe Theatre which has been created and peopled with VR actors performing familiar scenes from the Bard's plays. In addition, a user of the Virtual Globe Theatre may take the place of one of the VR actors within a scene and play a part. Movement and speaking cues for the human actor are provided concurrent with the action of the scene. To be or virtually not to be...

VIRTUAL SPORT

The Vivid Group has focused on a line of sports simulators.

Using the Mandala System, launched back in 1988 on the Amiga, Vivid has converted several different sports into interactive computer-generated simulations. The Mandala System uses a video camera interface to allow players to interact directly in the virtual world. Sports include Basketball, Hockey, Volleyball, Golf and Soccer.

VIRTUAL SIMULATION

Intelligent Systems Solutions Ltd coordinated a VRS project which was designed in order to introduce British industry to the technical and commercial benefits from VR.

Two flagship projects - the virtual Rolls Royce Trent 800 aero-engine and the Vickers Shipbuilding and Engineering submarine compartment have been well received. The initiative has opened up a number of interesting opportunities including urban regeneration and minimally invasive therapy such as laparoscopies. One project led by the Salford based company was undertaken in collaboration with the Co-operative Wholesale Society (CWS) which was to permit the visualisation of supermarket shelf layouts and to allow marketers to interact with space planners, product buyers and supermarket managers. A further aim was to investigate the integration of VR as an intuitive user interface with electronic

point-of-sale systems, electronic shelf edge pricing, customer tracking systems and intelligent packaging. ("Intelligent packaging"? If VR can help us to that and fill less of our dustbins then it would have brought us all real - and we do mean real - benefit.)

DESIGN REALITY

Companies faced with the challenge of creating a designs for new projects, however small or expansive are now utilizing virtual reality to create the reality before the real world is there.

VIRTUALLY HOME

Matsushita Electric Works (MEW), Japan's leader in building construction and appliances, has built an



A virtual house for the virtually homeless.

advanced interactive design experience using virtual reality to model a complete house. This immersive walk-through simulates all features necessary for the design of advanced living environments, including 3D presentation of lighting, heating and acoustics. During the design stage and later dur-

ing the modelling, many questions occur of how the items of furniture will fit, and even where shadows will fall. To visualize all of this MEW starts with a 3D geometry of the exterior and interior. Photo-realistic textures are added and furniture and fittings are colour matched.

Desirable Residences



Home, sweet virtual home.

Virtual Reality has been used to show houses that have not yet been built to prospective buyers at a new housing development in the Netherlands. An Association of 300 companies in the building trade commissioned The Calibre Institute at the University of Eindhoven to construct virtual models of houses, complete with interiors and external landscapes. Prospective purchasers who visit the development site can put on a headset and walk down the street as it will look once built. As they walk into any particular house, they get a realistic view of the rooms within the house including the kitchen, living room and a bedroom.

Flying Along

The Heathrow express rail link from the centre of London to the airport doesn't exist yet but the British Airways Authority is modelling this and the future Terminal 5 project using computer aided 3D design and virtual reality.

Once information has been input with regard to numbers of passengers, aircraft types and shops, a computer roughs a model of a terminal building in half an hour. An architect would take several weeks to do this. Three-dimensional designs allow the team to build the project on screen, visually walk around it and make changes. This allows engineers to look

at every nut and bolt positions, prospective retailers to decide where to put their shops and interior designers to blend it all together. (And passengers to take the plane to a virtual Florida?)

VIRTUAL REDEVELOPMENT

Tyne and Wear Development Corporation, working with Real Time Design, is using Superscape software to visualise a £190 million redevelopment of Newcastle upon Tyne's Quayside. Architects' CAD (Computer Aided Design) drawings can be transferred into Superscape to help provide detailed visual information and real time walk throughs for civil engineers, planners and members of the Development Corporation before construction work begins.

DATA VISUALISATION

The Systems Research Division of BT initially adopted software to build a concept demonstrator illustrating the role of virtual reality as a means of visualising complex, multi-layered communications networks. Network traffic management, error location and identification will be the next stage in this project.

STAND ALONE

Academy Expo, an exhibition stand design and supply company is using Superscape to enhance the design and marketing of exhibition stands. The benefit of interactive visualisation is an improvement on the static alternative of artist's impressions. In sales situations, prospective customers are able to walk around their stand and view it from all angles. Changes and enhancements can be implemented at the client's request in a matter of seconds.

BOWLED OVER

Real Time Design has used VR in the construction of a new Durham county cricket ground, the first new pitch laid for 100 years. The virtual environment was developed with landscape architects to illustrate various design options with the relevant District councils and members of the Cricket Club.

WINDOW SHOPPING

In Japan you can visit a virtual reality kitchen showroom. Once the details of your room have been entered, the headset creates a digital model. Then using a dataglove, you pick units and slot them into place.

INDUSTRIAL CONCEPTS

The Computer Aided Industrial and Information Design (CAIID) researchers at Coventry School of Art and Design at Coventry University are working on immersive virtual reality for use in industrial concept design and evaluation with Division.

Virtual Reality allows CAIID to view concept designs in full size. The interaction between VR and design allows evaluation for functional correctness, ease of assembly and maintainability. For example, it can be moving or articulated components such as automobile or train doors. The cost and time savings that virtual reality can bring over conventional mock-up development allows trials to be performed earlier, increasing design quality and efficiency.

AIRCRAFT DESIGN

McDonnell Douglas bought the ProVision 100 VPX system from VR development company, Division, to

Assembling a plane in VR like a Meccano set.



Imagine what you could do with...

...Lightwave 3D

The definitive 3D rendering and animation software package – used for Babylon 5, Sequest DSV, Star Trek TNG, The X Files etc...

Sparks for Lightwave

Particle animation system for Lightwave allowing gravity, gusting etc...

Lee Stranahan Lightwave Videos

These fantastic videos cover everything from displacement mapping and morphing to bones, surfaces and textures.

Surface Pro for Lightwave 3D

A stunning collection of 60 surfaces and textures. Surface Pro also includes some incredible procedural textures.

Combo Collection for Lightwave 3D

A collection of 24 bit real world seamless images for Lightwave 3D.

Warp Engine

The ultimate accelerator – Fast SCSI 2 controller and RAM expansion for the Amiga A3000 and A4000.

Sunrise AD516 and Studio 16

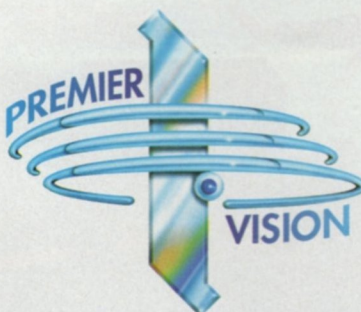
This incredible direct to disk recorder is generally regarded as the Amiga's finest hard disk sampler and can be linked to Bars & Pipes Pro to give you the ultimate recording studio.

Power Macros for Lightwave

Power Macros are easy to use and are great to watch. Macros such as shatter and blow up can be combined to create stunning special effects.

Humanoid for Lightwave

At last a detailed hierarchical human model with morphing features available for Lightwave 3D.



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utilize VR to design geometry for an F/A-18 tactical strike fighter engine, the engine bay and various maintenance equipment. Division engineers then created a VR environment to show how an aircraft design can be evaluated to determine how easy or difficult it will be to maintain. The McDonnell Douglas engineers were able to immerse themselves in the VR environment where they inspected models to install and remove the engine and to evaluate interferences.

READING THROUGH

Designers from Hastings College of Design and Technology's course in Design and Communications have used Division's VR Visual Design Environment to redesign the layout of the College's library.

Traditional drawing and drafting techniques were used during the early stages of the design, and Division's VR Visual Design Environment was initially brought in to provide students with a chance to design with the most modern tools. In the first virtual walk-through, unexpected construction was experienced in several thoroughfares. While traditional space and capacity planning had been carried out, the particular configurations of pylons, ducts and fittings inhibited practical use of space and the interactive walk-through provided a quick overview of these flaws and the design was modified and re-tested to confirm that the problems had been fixed.

DRIVING FORCE

At the Coventry School of Art and Design, automotive designers are using virtual reality to build prototypes early in the design process. Using Division's VR Visual Design Environment, Coventry School of Art and Design students are able to view, manipulate and assemble a new automobile and assess its design. The first design in a new model was created after examining the structure of the car. Using the VR Visual Design Environment, the designers were able to create a virtual model of the car and assess its design. The first design in a new model was created after examining the structure of the car. Using the VR Visual Design Environment, the designers were able to create a virtual model of the car and assess its design.

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READING THROUGH

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DRIVING FORCE

At the Coventry School of Art and Design, automotive designers are using virtual reality to build prototypes very early in the design process. Using Division's dVISE Virtual Design Environment, Coventry take their first pen and paper sketches of a new automobile, and assemble these into a full, solid, 3D model of the car. This is done in a few minutes, after scanning the sketches into the computer. Using 3D projection techniques, the sketches are layered onto a simple skeletal frame of the car and immediately a life-sized realistic prototype of the car is available in virtual reality. Designers can walk around the design, see it in a natural context (such as a showroom or a country road), sit in the driver's seat and check view lines. Fundamental flaws can then be corrected at a very early stage.

VIRTUAL LEARNING

VR brings to life almost any subject covered in today's educational programmes or training courses. Even the youngest student can explore and interact with virtual worlds, learning not only the substantive topic but also skills involving problem solving and computer techniques.

Virtual reality appears to offer many educational potentials as a simulation tool, a problem solving and visualization tool, a human computer interface, a communication medium, and an artistic medium.

FANTASTIC VOYAGE

Argus Productions create multi-sensory Virtual Reality displays to enhance practically any educational program, in a classroom, museum or training centre, they claim. By projecting the VR image onto a large screen, a teacher can guide the entire class through 3D models of a hydrogen atom, or the crab nebula.

"Imagine", say Argos, "a student hitching a ride on a dragonfly as it skims the surface of a pond, hunting other insects. The student jumps off into the water, shrinking to a microscopic level to examine single-celled organisms living in the water - or even the water molecules themselves, to observe surface tension between the water and air."

From manufacturing to property appraisal to customer service, Virtual Reality programs can enhance the training process by providing hands on experience in a safe controlled environment. In a virtual setting, trainees can experiment and explore the outcomes of decisions without risk to themselves or expensive equipment.

VIRART ENVIRONMENTS

Virart, the Virtual Reality Applications Research Team at Nottingham University, develops virtual environments for children and adults with learning disabilities. Virart has recently completed an investigation into the feasibility of industrial use of VR in the UK. The team uses Superscape to develop virtual environments for a variety of manufacturing applications and carries out research evaluations of utility, usability, interfacing, ergonomics and health and safety.

Trainees wear nVision's high resolution head mount display with images generated by an Silicon Graphics Onyx Reality Engine. The user is armed with both semi-automatic and anti-tank weapons.

The US army is using this VR in the research and development for simulation and training of difficult, dangerous or time-critical tasks. It is moving into the use of distributed virtual environments for evaluating weapons systems and for immersing humans into large-scale battles. Can we have all our wars like this in future, please?

RESEARCH NOW

The Bagrit Centre, part of Imperial College in London, conducts a wide range of advanced research programs specifically directed at the interface between physical science, engineering and medicine. A recent conference, chaired by the director of the Bagrit Centre, examined the possibilities of VR in the short term and what can usefully be achieved now, rather than what might be possible in the 21st century.

INFANTRY TRAINING



Training soldiers using interactive technology.

The US Army Research Laboratory is conducting research into virtual reality, focusing on training the individual soldier by putting the infantry in a virtual environment.

The virtual environment is a townscape with enemy tanks and para-troopers.

EMPOWERING DISABLED

Argus Productions' Virtual Reality programs can assist people with disabilities in two important areas. VR

offers people with physical and/or learning disabilities new means of interacting with both computers and the world. VR enables people, even those with extremely limited functions to enter commands through small muscle movements of the eye, finger or any other body part. VR can also provide product designers, architects and therapists insight into the challenges and obstacles facing people with disabilities. Through the blinking of an eye, a student with limited physical function can turn the pages of a book, participate in a group science project or even swing the bat in a simulated baseball game.

A recent example was for an architect's office which had the brief to design a city office building which was suitable for people in wheelchairs and well as able bodied staff. The architect using a VR program could manoeuvre a wheelchair through the corridors and redesign any areas causing restrictions or obstructions.

ROAD TRAFFIC

Argus Productions provide a VR training programme for professionals who have to respond to road traffic accidents. Emergency personnel arriving at the scene of a VR simulated multiple car accident must treat and transport nine people with varying levels of trauma. Police and paramedics practice reducing response times, identifying injuries and applying appropriate treatment in this Virtual Reality world of triage.

MOLECULAR MODELLING

Glaxo Group Research, the University of York and Division Ltd. are collaborating on the development of virtual reality tools for molecular modelling for drug design.

Molecular graphics systems allow scientists to interact with and manipulate representations of molecules to understand and model the relationship between the three dimensional

Virtual safety

Designing and Testing for hazardous environments can be carried out safely using VR programs.

NUCLEAR REACTION

The Research and Development Division of Electricite de France is using a Silicon Graphics Crimson Reality Engine and Division's virtual reality software to design and test the operating procedures of a nuclear powerplant. One example is to examine the maintenance of nuclear reactors. The hazards to real maintenance engineers is in the length of time spent in close proximity with the risks of radiation. Using the VR system the engineer can move around the virtual building following the paths and actions proposed for the maintenance activity. While this happens the system continuously computes the theoretical radiation which would have been received had the engineer performed the actual operation.



Design and test a hazardous environment.

SELLING SAFETY

Volvo (UK) has demonstrated that an accurate virtual reality simulation communicates a deep and complete understanding of how an automobile design prevents injury during an accident. Volvo has developed a fully immersive simulator of its 850 GLT saloon. Prospective buyers of an 850 can experience an accident and can watch the safety features of the car in action. Explaining to the customer how these features work is very difficult but Volvo's marketing strategy depends heavily on these features being fully understood and appreciated by the customer. They believe VR helps sell safety - and cars.



Molecular Modelling in VR.

structure of a molecule and its function. Virtual Reality brings a new level to the scientist's interaction with three dimensional models. It allows chemists to reach out, pick up and manipulate pieces of molecular structure.

VIRTUAL THERAPY

The Kaiser-Permanente Medical Group in California has developed a trial system which evaluates the use of virtual reality in the treatment of patients with a fear of heights. This virtual therapy has helped 90% of participants to reach self assigned treatment goals. These have included walking over a narrow plank and crossing a suspension bridge spanning a deep gorge. (Don't look down.. Or rather do, and you'll never fall..)

Using Division's Provision 100 system, a study was designed to determine the effects of immersing individuals into a computer generated virtual environment in which they encountered the perception of depth and height. Those people immersed in the

environment were able to move through the scene, look in all directions and explore much as they

would the real world, such as walking to the edge of the plank or bridge and looking below. After successfully surviving their virtual encounter with heights and depths, participants face two "real world" goals such as going up a glass enclosed elevator while



Conquer your fear of looking like a prat with a funny helmet on.

looking out at surroundings. (Try the Westin Bonaventure in Los Angeles - scene of the climax in Clint Eastwood's "In The Line of Fire" Did they use VR in that?)

VIRTUAL ANATOMY

American doctors use a NASA VR system to study the anatomy of a human leg. What they see is shown floating between them and the screens at the rear. Boston surgeons guided by a 3-D image have performed brain surgery. But one problem not yet resolved is teaching surgeons to operate without being able to see their real hands.

VIRTUAL VISION

Researchers at BioControl are working on contact lenses that can monitor electrical activity on the retina and deduce what the eye is looking at. The company is also developing a sensor to read brain waves.

PROJECT ELYSIUM

Developed on the Project Elysium virtual reality system, Virtuality, once called W Industries and who started out by using Amigas to control those VR cars in the arcades, have software designers working in conjunction with the Queen's Medical Centre at Nottingham University to complete the development of the first VR medical training application for anaesthetists.

The application allows medical students to practice treating unusual critical incidents without risk to real patients. The user enters the operating theatre containing all the equipment as a direct replica of the real theatre at the hospital. The software lets the patient exhibit all the normal and pathophysiological responses to treatment which are also reflected in the VR monitoring equipment. Colour changes, cardiovascular and respiratory responses can be heard and seen. ("Not the scalpel Nurse, the oxygen cylinder, the anaesthetist has virtually fainted.")



VR helmets can save your from virtual head injuries.

VIRTUAL ANATOMY

Jack looks like a human. He is shaped like a human, moves works and reacts like a human. Designed for virtual reality situations he can be used with CAD

designs to test out the human factor. For example he has been used in new car designs to test seat adjustment, corner vision and instrument reach limita-

tions. GMS have created Jack (who can be female.. Jackie?) as a human factor modelling system, which can be found wandering the screen so that the computer created worlds can be seen,

heard, touched and manipulated.

"With the help of a helmet and viewing goggles you can see what Jack sees. Turn your head and Jack turns his. Your view of the virtual world changes as his does. Add data gloves and Jack's sensations become your sensations." (And Jackie's? Oh really?) Jack has been

used to test the ergonomics of designs, enabling a virtual human to walk through and interact with the designs before they are built, assessing the safety features and maintenance at the same time.

The world that Jack built.

Virtual Leaders

Convinced that there is more to Virtual Reality than the games you see in the arcades? Now you know that 'tomorrow's world' has arrived you may want to find out who is doing what in the development of these systems. The companies mentioned so far are listed at the end of this Special Report, but here is a round up of the products and companies leading in the field.

VIRTUAL GROUP

Virtuality manufactures VR entertainment systems and currently has 90% of the market share. When they were known as "W Industries" they always used Amigas, now they are using other machines too. As well as the entertainment division, the company is also developing VR entertainment software having contracts with IBM, Sega and Universal Studios. The company recently established its technology licencing division, to develop PC VR accelerator cards, operating systems and development tools and peripherals. Their IBM link-up means they are offering system from £7000 up - on PCs naturally.

IBM CORPORATIONS

The IBM ValuePoint PC, upon which Project Elysium is based (see Virtual Medicine section). Joining up with Virtuality, IBM claim to have produced the world's first high quality and low cost Immersive Virtual Reality (IVR) development system, designed spe-

cifically for creating IVR application software. The user can select a pre-configured system or can build the right system to match requirements. You can create your own ValuePoint by selecting a system, shell, processor, memory size, hard disk, operating system and any options you need. The machine will be factory assembled to your specifications. (Virtually?)

V-SPACE

V-Space is an interactive 3D modelling and VR world creation system running under Microsoft Windows. V-Space is a way to develop 3D content in applications such as architectural design, engineering design, medical training and 3D animation. V-Space allows complex objects to be created within the system, or imported from other modelling packages. These may be transformed and simplified using special filters.

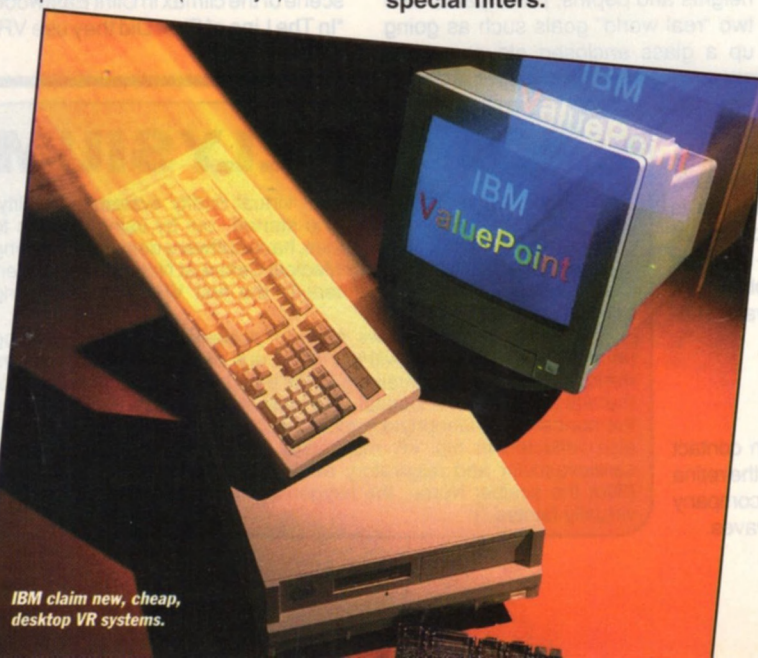


Another poor sod forced by poverty to pose in a naff headset.

V-PC

V-PC is an open VR software operating system. Software applications are created using C++ class libraries containing classes for basic data structures, communications, rule/event processing and creation of hierarchical 3D models.

Futuristic VR desktop console.



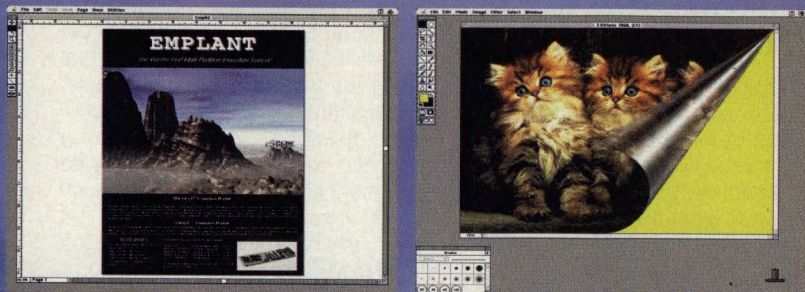
IBM claim new, cheap, desktop VR systems.



EMPLANT

The World's First Multi-Platform Emulation System!

**Come
and meet
Jim Drew
at The World of
Amiga Show**



EMPLANT runs high powered programs like Quark Express and Adobe PhotoShop!!

New Prices !!

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The Macintosh emulation module is a 'generic' Macintosh with the speed of the emulation depending on the processor your Amiga is using. An A3000 is equivalent to a MAC IIci. An A4000 is equivalent to a Quadra 900. Support for up to 16 colours is provided for non-AGA machines. A4000 owners can use a full 256 colours! Up to 24 bit (16 million+) colours is supported using third party video boards such as: Picasso II, EGS-Spectrum, Vivid-24, Rainbow II, Rainbow III, Visiona Paint, Merlin, Retina, Retina Z3, Piccolo, EGS110/24, and OpalVision! Built in multiple file transfer allows for quick, easy transfers between the Amiga and MAC emulation. Support for AmigaDOS devices, Scanners, CD ROM, MIDI, SyQuest removable drives, Printers, Modems etc. Full stereo sound is supported too! Requires Macintosh ROMs (not supplied).

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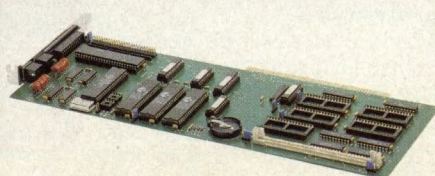
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V-FLEXOR

V-Flexor provides proportional pressure finger inputs, allowing glove style emulation of virtual hands.

Used in combination with the Project Elysium VR system, the V-Floexor hand-held peripheral offers the VR user a flexible and innovative range of Human Computer Interface configurations (Watch out Jack!).

"Microsnap HCI multifunction thumb operated cassette modules" (What's that again?) offer a range of plug in modules that locate in either V-Flexor or Project Elysium housing. Modules may also be developed by the user.

VISETTE 2

The Visette2 is a head mounted display for immersive VR applications. It combines active matrix polysilicon TFT LCD displays together with custom moulded optics and microfocus depixillators to provide picture clarity, colour fidelity and wide view focus., with digital CD sound. The system includes a basic speech analysis capability.

DIVE BELT

Avatar Partners and General Reality Company have produced the DIVE Belt wireless reality interface. The DIVE Belt provides the ability to operate inside a high performance virtual environment without becoming entangled in wires or cord.

It includes video and audio receivers, a wireless headtracking data sender and a suite of battery packs.

The system communicates in real time with a desktop workstation, which interprets the wireless tracking data, generates appropriate views of a virtual world and transmits the images to the belt as digital video and power to a General Reality CyberEye head mounted display.

The DIVE project is a Phase 1 Small Business Innovation Research contract funded by the US Army Simulation Training and Instrumentation Command.

The project's goal is to deploy a series of facilities that will allow a realistic large-scale simulation of dismounted infantry operations. A facility will consist of rooms which will allow an individual soldier to operate within a virtual battlefield.

The soldiers will be free to move from room to room by wearing a DIVE Belt, and video techniques will be used to track the soldier's limb motions.

ARGUS PRODUCTION

Argus Productions claims to build custom Virtual Reality worlds for almost any application. They produce virtual worlds for a variety of business and educational applications and help companies develop new ways to utilise the advanced technology. They provide equipment and technicians for special events or train staff

to run the VR programs. Argus supplies range from a complete Turn-key system or any key component.

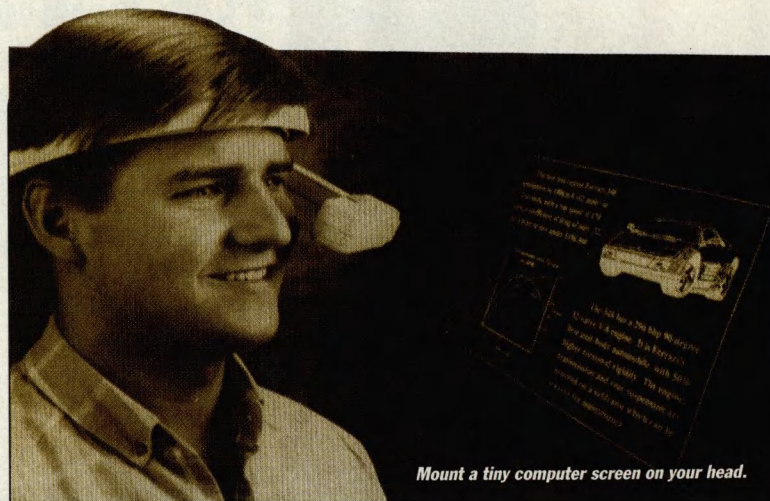
VREAM SOFTWARE

The VREAM Virtual software is a development package that allows non-programmers to develop fully interactive, textured virtual worlds on a personal computer. The Vream 2.0 software development system is claimed to be a complete, fully interactive, textured virtual world with advanced world-building techniques. Vream virtual worlds use a variety of interface devices including immersive, with head mounted displays, 3D tracking systems, 3D mice and 3D position controllers.

DIVISION'S HMD

Division has launched dVISOR, an head mounted display (HMD) which combines LCD displays and advanced optical technology with ergonomic design to improve the quality of immersive experiences.

Using active matrix TFT LCD panels for the displays the field of view is extended to 105 degrees. dVISOR uses depixelation technology which eliminates the LCD pixel grid without, they claim, blurring.



Mount a tiny computer screen on your head.

PRIVATE EYE

The Private Eye from InfoDisp is "a full size display that fits in the palm of a hand." (Oh really?) The virtual screen is a 12" image that appears to float a few feet in front of the user. It weighs only 2 1/4 ounces and can be battery powered for portability.

The Private Eye is claimed to present a sharp, vibrant red image on a deep black background. It displays 720 x 280 pixels which can be formatted as 25 lines with 80 characters per line or can be used to show crisp bitmap graphics. It enables large products to be fully portable. For example instead of carrying a large book, manufacturing and repair workers requiring mobility can carry and view text and diagrams from a complete manual. New information can be added via the mainframe links, CD-ROM databases, wireless links or hardwired connections to a personal computer.

The Private Eye can be built into a pocket size terminal for use in a car, aeroplane, or hotel room. The high resolution and large image enable it to be used as an electronic book, providing text, graphics and animated images to people wherever they are.

dVISE

Division's dVISE is a tool for building and experiencing virtual worlds. As a ready-to-run application, it can be used for quickly constructing, editing and simulating virtual environments to create virtual worlds. It is a combination of a 3D immersive user interface and a 2D desktop interface, which allows users to import existing CAD geometry to bring the design to life.

You can add or modify the texture and colour of materials, define the hierarchical relationship between objects, define how objects are constrained, for example, a door on its hinges, and provide a functional de-

scription of object behaviour. In this way a life size functional prototype of a design can be built

dVise provides a natural and easy way of editing the virtual world and can move objects around by selecting them and dragging them in 3D to their new locations.

Object animations are created by selecting the object and sweeping the virtual hand through the required flight path. A variety of editing tools are also provided within the immersive environment to edit size and colour, object hierarchies and to add and delete objects.

PIXEL PLANES

The Department of Computer Science at the University of North Carolina was responsible for developing Pixel-Planes 5 - a high performance image generation system. The first Pixel Planes concept was devised by Professor Henry Fuchs in the early 80s and since then several generations of advanced research machines have been built on this very powerful architecture.

Pixel-Planes 6 scales from entry level systems with peak performance of 500,000 triangles per second. The result is image generation performance that meets the needs of the most demanding virtual reality applications.

VIRTUAL WORLDS

Virtual worlds are populated with objects having a definable appearance and controllable interactive animated properties.

The result is an advanced yet intuitive world-authoring tool for creating virtual environments of unprecedented complexity and new levels of reality.

REALITY BLASTER

Synthetic Images Incorporated has brought out the Model RB-1000PC Reality Blaster. This technology combines RISC, DSP, and custom processor hardware with advanced math and control algorithms to produce a PC board that provides advanced virtual reality and simulation capabilities.

And what is this amazing device? No more than a standard PC compatible, full length ISA card.

There was a time when the Amiga could beat the PC but with all these leading edge companies putting their bets onto what were once patronisingly called "IBM compatibles" the Amiga is going to have to move virtually at the speed of light to catch up.

8192 PROCESSORS

Hewlett-Packard's series 700 workstations can be teamed with Division's range of software which supports all HP graphics options. The software takes advantage of the multiple processors and networked systems and there is full compatibility across the product line.

For fully immersive VR, Division's Provision 10 virtual reality accelerator can be added to the HP715 and 735 workstations. This EISA-bus expansion chassis uses Division's VPX card with Pixel Planes technology to apply 8,192 processors to the task of image generation. The result is 300k texture mapped, Z buffered, polygons per second, and 997M pixel throughput, for realtime interactive display of complex scenes with visual realism.

Are these people models or do they always look so bored?



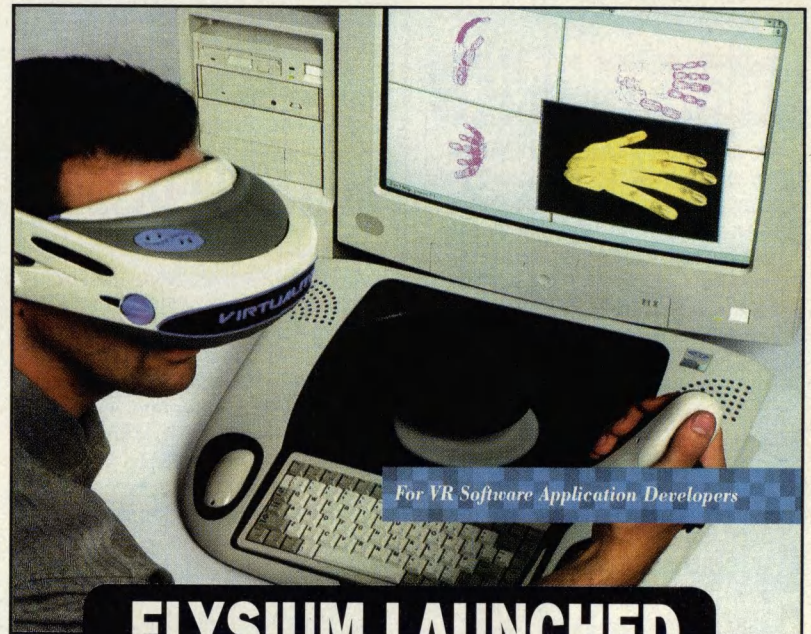
DIGISTAR II STAR

Evans & Sutherland Computer Corporation has Digistar II, "the next generation star projection system for planetariums, science centres, space theatres and other entertainment and education applications." Digistar II is a special purpose com-

puter graphics system that can simulate stars, planets and other traditional planetarium objects. Digistar can generate special effects such as dynamic proper motion and travel through three-dimensional space. As a virtual reality teaching tool, it can draw and project virtually any three-dimensional image composed of lines and points, such as line drawings of buildings, cities, spaceships, clouds, molecules and mathematical functions.

Virtual Update

Now you have the facts at the tips at your virtual fingertips, you'll need to know the latest news from the VR world.



ELYSIUM LAUNCHED

The Virtuality Group gave the first public demonstration of its Elysium VR systems at the recent Virtual Reality Users Show, held in London. Elysium is claimed to be the first range of fully integrated, PC-based portable VR computer purpose designed for VR

application developers. The systems are based on IBM PCs. The Elysium range is fully portable and scalable allowing graphics power to be added by plugging in Virtuality's specialised PC cards. It has been designed to be easily upgradable.



Hewlett Packard and Division

Division and H-P have signed a strategic alliance and product development agreement that, they say, will strengthen the two companies' virtual reality (VR) applications in computer-aided design (CAD), training and medicine. The two companies will also collaborate on future generations of high-performance graphics products.

VIRTUAL CONCEPT

London based electronic band - The Future Sound of London - appeared live at The Kitchen in New York. Well, virtually live that is! With bands increasingly turning to video projections and computer sequencing, it's no surprise that VR is also being used.

The audience at the Kitchen heard a realtime, live rendition of FOOL as the band played their samplers and synthesisers in a London studio, relaying the result to New York on an ISDN line. For future bandless concerts, the group plan to use moving 3D animatronics versions of themselves to become "the most dynamic performers of all time".

VIRTUAL MONEY

Mecklermedia's New York Virtual Reality Expo was the first Venture Capital forum expressly designed to bring the virtual reality business community together with the investment community. The Venture Capital Forum highlighted points which will lead the potential investor to an understanding of why the venture will succeed, such as markets and marketing strategies, management, financial summaries, as well as products and services.

Cyberspace Development Kit

Avatar Partners and General Reality Company have produced the DIVE Belt wireless reality interface. The DIVE Belt provides the ability to operate inside a high performance virtual environment without becoming entangled in wires or cord. It includes video and audio receivers, a wireless head-trackinging data sender and a suite of battery packs. The system communicates in real time with a desktop workstation, which interprets the wireless tracking data, generates appropriate views of a virtual world and transmits the images to the belt as digital video and power to a General Reality CyberEye head mounted display. The DIVE project is a Phase 1 Small Business Innovation Research contract funded by the US Army Simulation Training and Instrumentation Command. The project's goal is to deploy a series of facilities that will allow a realistic large-scale simulation of dismounted infantry operations. A facility will consist of rooms which will allow an individual soldier to operate within a virtual battlefield. The soldiers will be free to move from room to room by wearing a DIVE Belt, and video techniques will be used to track the soldier's limb motions.

CIRRUS LOGIC

Cirrus Logic has announced Mondello, a 3-chip geometry, lighting and rendering package for designers of 3D graphics accelerators for PCs running Windows 3.1. Its claimed performance is 250K Gouraud shaded Z-buffered etc. polygons/second and resolutions up to 1280 x 1024. Compatibility with existing de facto and industry standards is a major emphasis, including support for OpenGL, Intel's 3DR, RenderMorphics' Reality Labs, Ithaca's HOOPS, VESA's VAGL and Argonaut's BRender API. (Note that last one. Argonaut's BRender - Jez San, the first distributor of early Amiga things like Newtek's DigiView digitiser, is now establishing world standards for VR from Hendon in north London. How the world ... and not just the virtual world... has changed!

Tektronix Display

Tektronix has reduced the price of its EX100HD one-inch colour display system to \$9750. The system is designed for incorporation in high-performance HMDs, and comprises twin one-inch CRTs, with bonded field-sequential colour shutters attached by ten-foot cables to a power module. Typical resolution is 640 x 480 non-interlaced, though the system can be configured to run at 1280 x 960 interlaced. The EX100HD is compatible with the SGI RealityEngine's support for field-sequential monitors, or can be used with PCs via a Tektronix-supplied optional controller board set.

VIRTUAL ATTACK

Liquid Image showed its new Virtual Attack Planner system at both the Farnborough International Air Show and the VR User show in London. It is a pilot training system designed to provide specific terrain familiarity, including both physical terrain characteristics and threat representations. The system uses the commercial version (MRG3c) of the Liquid Image MRG3HMD, released for military use only up to now.



VRL VISTAPRO

Virtual Reality Laboratories' VistaPro software is best known for its detailed 3D rendering of Martian and other extra-terrestrial landscapes, based on NASA-supplied photographic material and terrain databases. Popular on the Amiga, VistaPro has enabled many virtual environment designers to use Vistapro frame sequences as a source of textures.

The company has recently announced various additions to its repertoire, including a version of VistaPro, capable of producing QuickTime-compatible fly-pats, plus CD-ROMs full of landscape data sets from the US Geological Survey and NASA, including footage of the Shoemaker-Levy/Jupiter collision.

ALADIN'S INNOVENTIONS

An Aladdin's Magic Carpet VR ride shown by Walt Disney Imagineering at Sigggraph Show is now available also at Disney World as part of the Innoventions exhibit at Epcot Centre. The carpet is a user-steerable electrically-driven motion base, and the riders wear high-resolution HMDs, incor-

porating miniature CRTs with Tektronix colour shutters. The riders fly through Aladdin's town of Agrabah, looking for Aladdin's lamp. They are accompanied by Iago, in the form of a real-time computer generated virtual creature with a wide repertoire of human-like movements and gestures. An array of Silicon Graphics Onyx Reality Engines controls the system. (What no genie?)

First Cyber Wedding

The World's first cyber-wedding happened recently and where else but on the west coast of the USA? For real, we mean, not some virtual west coast.. Bride and groom wore HMDs and the wedding ceremony took place in a virtual representation of the lost city of Atlantis, complete with a horse-drawn chariot, and wall to wall hearts, flowers and doves. The bride is employed by Cybermind, the San Francisco-based arcade company and the equipment used was their recently installed Visions of Reality system equipped with Kaiser Electro-Optics VIM HMDs. Was there only a virtual honeymoon, we wonder..

MAGIC MEDIA

North London based Magic Media expects to have its low cost HMD in production shortly. All in price is expected to be under £400.00 including built-in 3DOF sourceless motion sensor, joystick fitted with simple orientation sensor, VGA/PAL convertor for use with PCs (the HMD will connect directly to any PAL video source), and a first software game.

The device uses the 3.8 inch Citizen LCD which has around 93,500 colour pixels and also includes stereo earphones. Overall weight is expected to be around 2lbs.

Kopins sells HMD's

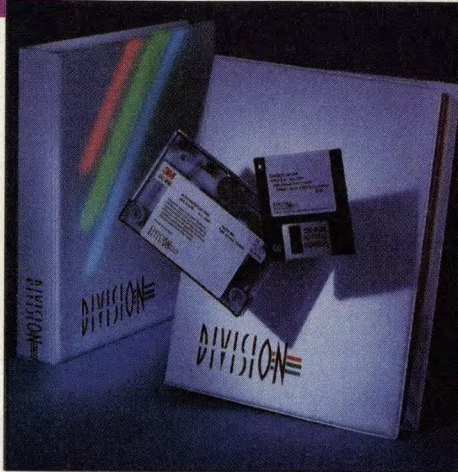
Kopin Corporation has received an initial production order for 1200 headmounted display systems from the Collins Avionics and Communications Division of Rockwell International. Kopin's 640 x 480 monochrome LCD will be used. The HMDs are for commercial applications in a variety of industries, including automotive, aircraft, cable television, utilities, training and telecommunications. They will be used in conjunction with the Mobile Assistant belt-worn-voice-activated computer system developed by Fairfax, Virginia-based Computer Products and Services Inc.

ACTORS WITHOUT DIRECTORS

Virtual Entertainment

The closest many of us will have come to VR is in the arcades like the Trocadero in London. As in the other "virtual worlds", entertainment is feeling the impact of the technological VR revolution.

dVS, from Division, is a run time environment for virtual reality based upon a distributed model in which multiple servers called Actors control different aspects of the 2D and 3D user interface. A range of standard Actors provide services such as high performance visual simulation, acoustic simulation, collision detection, control of peripherals and model of the users virtual body. These Actors may run concurrently on one or several hosts for maximum performance and use of multiple CDs.



Dropping into the world of virtual reality games.

I'M NOT REAL, PLAY ME

Standalone VR systems are being placed within entertainment settings such as museums, arcades, hotels, theme parks, children's play zones or even at private parties. The development of themed Virtual Reality experiences has emerged as one manner of integrating VR within the entertainment industry. Themed VR ex-

periences vary in their hardware and software configurations and may be immersive or non-immersive, but they typically provide an orientation and debriefing for players together with the electronic experience. Today's VR lays emphasis on social dynamics with virtual opponents and virtual team-mate interaction.

IN THE ARCADE

The Virtual Entertainment marketplace - both public and consumer is being predicted to have explosive, or virtually explosive, accelerating growth from late 1994, with usable £500 headmounted displays becoming available for the first time. These are arriving along with proliferating low-cost 3D graphics hardware and software products. Games developers and video and animation studios are starting to find their way into the market, and early trends are beginning to emerge. Virtuality Group, (see earlier) based in Leicester is a supplier of integrated LBE systems. The system uses a headset and joystick to allow operators to play a number of VR games. Virtuality's latest headset looks less like a helmet than a very clunky pair of goggles - inside two video screens project graphics to each eye and movements of the head are picked up by sensors, which turn the view

inside the world as the player's head turns. Once fitted, the player can play alone or against other players. In some games the player can choose to take on the role of a character. Although headset based VR is the traditional VR system, several companies are working on arcade entertainments which are more like simulators. To experience these games, the user is enclosed in a cockpit or cab inside which there are a number of video screens. Sound is piped in and the game is operated by touching buttons or screens inside the cockpit. The cockpits can be mounted on motion bases which introduces an extra element of movement.

Several arcade operators are looking to introduce cockpit systems as they allow faster throughput of players than the headset based systems. The headsets are also heavy and for some people cause motion sickness.



Acting it out...

HOME VR

Current home entertainment platforms are hardly fast enough to run VR but the next generation will change that.

Sega and Nintendo's announced home VR systems or add-ons could transform VR into a mass consumer product. At present British companies are at the forefront of the industry because they are good at combining technology and creativity. The challenge will be in the ability to market and distribute home VR. At that point VR companies' skills should be in demand and they could play a major role. Whether they have the marketing strategies against the likes of Sega and Nintendo remains to be seen.

Meanwhile VictorMaxx Technologies have prepared for the home market with the release of CyberMaxx head mounted display, weighing less than a pound and retails at under £500.

As was recently reported in *AUI*, the VictorMaxx headset is being created for the Amiga although the first version, of course these days, has come out for the PC.

Reports are also arriving of other companies in the USA, including the world's biggest toy company, Hasbro, who are planning to bring out home VR headsets. The price point supposedly at which they will aim is under £199 a level they think will make it the big seller of the 90's.

VR LIVE

One way in which home VR has arrived is through the television screen. Broadcasters are using VR to create television game shows and real-time animated characters. Leading the way in real-time animation in Europe is Medialab, a subsidiary of French pay-TV channel Canal+ which has developed its own software - PORC or Puppets Orchestrated in real-time by computer.

With this technique, an actor drives the movement of a computer generated character on screen, which can be performed live. Medialab first used this technique to create the character 'Matt the Ghost', the virtual co-presenter of the Canaille Peluche programme on Canal+.

Medialab has since created a range of characters for Canal+ and for commercial channel TF1. Earlier this year, the first real time animated character was seen in the UK when Ratz, the cat, was launched as co-presenter of BBC TV's children's programmes. Ratz was created by TeleVirtual, a joint venture between Anglia TV, production company Broadsword and graphics designers The Travelling Matte Company. TeleVirtual has licenced the VActor system developed by US company SimGraphics Corps. VR is also being used in TV game production. BBC TV launched The Rat Run as an interactive game in which a viewer

phones in and directs Ratz through a VR maze to find and catch rats. Carlton currently has a programme, Virtually Impossible, in which children compete using head sets along corridors and a maze.

FAMILY VICE

Global Entertainment is planning to open a family oriented centre based on new game software and a cockpit VR system provisionally called Virtually Interactive Cinema Experience. (VICE).

Global are currently developing the game system. All VICE games will be licenced products, and will be operated on a franchise basis. The player will see the game via video screens and operate the game by touching buttons on either side. One screen will video project a helper to provide guidance and hints if the player is off course.

Future centres will have comfortable seating areas for parents waiting for their children. However, some cockpits will have buddy seats for parents to sit with their child. (Oh no!) They will be designed as multi-cinemas with different games in each cinema. Cards will be introduced, not only to determine membership transferrable between centres, but to record levels of play reached and seat position etc.

THE REALITY CHAMBER

The Reality Chamber is a way into the electronic superhighway allowing users to work or play together inside synthetic digital worlds, even while physically located in different places. RPI Advanced Technology Group's Chambers are designed for entertainment centres where users can enter exotic worlds and interplay with other players anywhere in the world. The network capable Chambers give users the ability to turn their heads to look around the digital world.

SOFTWARE

Velocity, a fast-growing company in the entertainment software industry is best known for Spectre, the 3D cyberspace action game.

Criterion Software, creators of interactive 3D graphics for personal computers, has announced that Velocity Development Corporation has licensed Criterion's RenderWare, the first interactive 3D graphics Application Programming Interface (API) for Windows. RenderWare provides interactive 3D graphics performance without the need for special 3D graphics accelerators.

Velocity has, it says, licensed RenderWare 3D graphics software to focus its resources on game content and game action. Based in San Francisco, the Corporation is a leading developer of virtual reality action games for the PC.

VIRTUAL TENNIS

Visitors to the 1994 AT&T Challenge in Atlanta, Georgia were able to take up a racket, jump on the court and play against the likes of Jim Courier, Michael Chang and Ivan Lendl. (What no Sampras?) Break Serve is the latest in the series of REALWare virtual reality games from CCG/ MetaMedia Ventures Inc. of New York City.

To test skills against one of the games best players, the participant takes his/her turn holding a specially coloured racket. Then stands in front of a bluescreen wall and sees him or herself in the video-world. After the user selects a pro opponent, the pro starts the game with a scorching serve. The user positions for the return and swings the racket. The slap of the ball is heard against the strings and the ball speeds across the net.

Other virtual games from CCG/ Metamedia include Virtual Hoops (basketball), and T-Probe: Virtual Voyage to XIA, a space adventure game.

FLIGHT SIMULATOR

Magic Edge Inc. has brought out the Magic Edge Capsule, an interactive flight simulator which permits pilots to navigate and control their own individual adventures. High-fidelity surround sound, they say, boosts the impact of the experience. A four channel system plus sub woofers combine for "heart pounding sound." Universal networking allows up to six pilots to compete against one another or fly as teams in the same world.

SERIES 2000

Virtuality's Series 2000 offers a range of experiences with interaction, co-operation and a range of graphics. The 2000SD is a sit down console like a doggem without wheels. The player takes control of a virtual vehicle using a plug-in headset to create a more realistic environment.

The stand up version, the 2000SU, is a kind of padded circle (orbitron) in which the player stands wearing a headset and handset, with a turn of 360 degrees. Virtuality also provides accessories and software. The games that can be played with the VR hardware include XTreme Strike for the 2000SD, which takes the player through intergalactic warfare; and Virtuality Boxing and Zone Hunter for the 2000SU.

FLYING ACES

Flying Aces from Virtuality has a virtual character who plays alongside the real ones. The human plays the part of a World War 1 ace pilot. The navigator who sits behind is controlled by computer. He gives advice about flying the plane and finding the enemy and then makes jokes about the human's performance!

One more remark like that, Humphrey, and over the wing you'll virtually go! *AUI*

CONTACTS

Argonaut Software Ltd., 70 Colindale Ave, London NW9 5ER. Tel: 081 959 72 49.

Argus Productions 270 Farmington Ave., Suite 326 Farmington, CT 06032. Tel: 203 676 2736.

Avatar Partners, 13090 Central Avenue, Boulder Creek, CA. 95006. Tel: 408 338 6460.

COLT Virtual Reality Ltd, New Lane, Havant Hampshire. PO9 2LY. Tel: 0705 45111.

Criterion Software, 17-20 Frederick Sanger Road, Guildford Surrey, GU2 5YD. Tel: 0483 448800.

Data Plant IT Ltd., 11, St. George's Mews, Primrose Hill, London NW1 8XE. Tel: 071 483 4095.

Division Ltd., 19 Apex Court, Woodlands, Almondsbury, Bristol BS12 4JT. Tel: 0454 615554.

GMS 3D Graphics and Virtual Reality, Marcus House, Wheelock Street, Middlewich, Cheshire. CW10 9AE. Tel: 01606 836093.

IBM (UK) Ltd., PO Box 7, Rockware Ave, Greenford Middlesex UB6 0DW. Tel: 081 575 7700.

InfoDisp Ltd., 12 Woolmer Way, Bordon, Hampshire GU35 9QF. Tel: 01420 479791.

Intel, MSRN5-25, 2200 Mission College Blvd., P.O. Box 58110, Santa Clara, CA. 95052-8114. Tel: 408 765 4512.

Intelligent Systems Solutions Ltd., University Road, Salford. M5 4PP. Tel: 061 745 7384.

Kaiser Electro-Optics, 2752 Loker Avenue West, Carlsbad, CA. USA. 92008. Tel: 619 438 9255.

Liquid Image Corp. 659 Century Street, Winnipeg Manitoba, R3H 0L9 Tel: 204 772 0137.

Myron Krueger, Artificial Reality, Box 786, Vernon CT USA. 06066. Tel: 203 871 1375.

RPI Advanced Technology Group, POB 14607, San Francisco, California 94114. Tel: 415 495 5671.

SALT - VR Design Specialists, 34 Ludlow Road, Guildford, Surrey GU2 5NW. Tel: 0483 574445.

Silicon Graphics, 1530 Arlington business Park, Theale, Reading, Berks, RG7 4SB Tel: 0734 257500

Superscape Ltd., Zephyr One, Calleva Park, Aldermaston, Berkshire RG7 4QZ Tel: 0734 810077.

Synthetic Images Inc. 5454 Hoffner Ave., Suite 102, Orlando. FL 32812. Tel: 407 282 7740.

Transformation Software, Thame Park Road, Thame, Oxon. OX9 3UQ. Tel: 0844 261456.

University of Surrey, Virtual Reality & Active Telepresence for Hazardous Environments Mechatronics Systems and Robotic Research Group, Department of Mechanical Engineering, Guildford, Surrey. GU2 5XH. Tel: 0483 300800.

Virtuality., Virtuality House, 3 Oswin Rd., Brailsford Industrial Park, Leicester LE3 1HR. Tel: 0533 542127.

Virtual Presence, 25 Corsham Street, London N1 6DR. Tel: 071 253 9699.

Virtual Reality Laboratories, San Luis Obispo, California USA. Tel: 805 545 8515.

Virtual World Entertainment, 1100 West Cermak, Suite B404, Chicago IL. 60608 Tel: 312 243 6515.

VIVID GROUP, 317 Adelaide St. West, Suite 302, Toronto ON M5V 1P9. Tel: 416 348 9809.

Westland System Assessment Ltd., Telec House, Goldcroft, Yeovil, Somerset. BA21 4DQ. Tel: 0935 24545.

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NEW SUPER-VHS GENLOCK FROM RENDALE

At last, the new Super-VHS Genlock from Rendale is available: called the 9402, it offers true S-VHS signals throughout, and all but eliminates chroma beat patterns associated with lesser quality formats. Attractively priced at £299 including VAT and delivery, this model offers quality at a value for money price.

It is supplied complete with it's own power supply and a comprehensive manual.

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Contact: Marcam Ltd, 62 Tenter Rd, Moulton Park, Northampton, NN3 6AX.
Tel: 01604 790466. Fax: 01604 647403 quote AUI Magazine

It's been a number of issues since we've looked at any new camcorders in this column, so this month we'll briefly cover three - all with something pretty innovative that might just be the sort of thing you're looking for.

JVC GR-SX1

The least innovative of the three, but with a superb specification, this Super VHS-C camcorder is priced at £999 and is intended to combat the (slowly) increasing dominance of Hi-8 camcorders. Apart from all the normal features you'd expect from a high-end camcorder the GR-SX1 boasts the following points:

A special video noise reduction circuit which reduces noise in those sensitive parts of the image with gradual brightness changes such as skin tone areas. A state of the art digital white balance system which provides extremely accurate control of the picture's colour balance. A unique feature is the ability to adjust picture sharpness and colour during actual shooting via a viewfinder menu.

Despite its palm size, the GR-



Another top camera out now from JVC.

SX1 has an f1.2 ten times zoom, six program auto exposure modes, three fade modes, timelapse, animation, insert edit and audio dub. The remote control features an eight scene random assembly edit function which will work automatically with over twenty common VCRs.

Contact JVC Tel: 081 450 3282.

Canon UC-X1 Hi8 camcorder from Canon features eye-control! By firing an infra-red beam into the user's eye, this Canon (oops! fire - Canon, no pun intended!) can tell which part of the display is being looked at and focuses accordingly. Truly marvellous.

CANON UC-X1 Hi

Now we're talking innovation. This new Hi-8 camcorder from Canon features eye-control! By firing an infra-red beam into the user's eye, this Canon (oops! fire - Canon, no pun intended!) can tell which part of the display is being looked at and focuses accordingly. Truly marvellous.

Another palmcorder, it features a new Lithium

ion battery, improved image stabilizer, six digital effects and five scene mixer effects such as dissolve and wipe. This compact size, found in the current range of Canon UC camcorders, is achieved by the use of new integrated circuits that process signals on a single chip.

Additional features include a LANC edit socket, twelve times variable speed zoom and four program automatic exposure modes with some manual over-ride.

The UC-X1 Hi is priced at a hefty £1,500, but is certainly a camera of the future.

Contact Canon UK Tel: 081 773 3173.

Eye control features on this latest camera from Canon.

THE VIDEO COLUMN

Alan Puzey finds some of the most exciting new camcorders fitting into the palm of his hand.

SANYO VM-EX33P

If you're still blinking at the thought of Canon's "eye control", sit down and hear what's coming from the Sanyo stable. I haven't even included a picture of it because not only is it yet another palmcorder type - looking normal but nice - but it is the Sanyo remote control that must surely top all others for the moment.

It has a colour monitor built in - allowing playback without connection to a television or by squinting into the viewfinder. Plugging the remote into the camera allows it to act as a viewfinder - from a distance. For when the camera is mounted on a tripod, there is even an optional tripod head allowing you to pan and tilt from a distance!

As well as controlling all the normal camera functions, this remote

has a mini edit suite built in as well, allowing editing to be carried out onto another VCR. At this stage I find myself saying, "What will they think of next?"

The camera itself has a twelve times zoom, shutter speeds up to 1/10,000 of a second (useful - but I can never find a subject illuminated brightly enough to use it!), a LANC socket, triple fuzzy logic and manual focusing ring.

A final touch of innovation to round things off is a display indicating the amount of tape and battery power left. The Sanyo VM-EX33P retails at a mere £799.99.

Contact Sanyo Tel: 01923 477477.



The Hi8 tape that makes it all possible.

NEW Hi8 METAL TAPE

A new metal evaporated tape from Sony claims an astonishing 60% improvement in picture quality. Using Sony's specifically developed "Evaticle II" particles, it boasts a higher density magnetic recording material. The new formulation uses a metal alloy based on cobalt and nickel. The new tape also has a newly developed back coating and lubricant to give long term stability and smooth running.

Sony claims that the new tape offers an enhancement of 2 dB in both luminance and chrominance signal-to-noise ratio and fewer drop-outs. This allows more delicate signals to be recorded.

This should prove to be an ideal tape for original recording, editing and dubbing. It is initially available in ninety minute cassettes, costing £19.99. The original Sony Hi8 ME tapes are consequently expected to fall in price, to less than £15.

Hi8 cassettes have never been cheap though it shouldn't be forgotten that you get one and a half hours of superb quality on Hi8 and, minute for minute, this measures up well against VHS-C. AUI



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Recently I had the pleasure of a brief but eventful visit to la belle France. A driving holiday in Normandy can be a nourishing experience, especially if you take time out to sample the cheese in the villages of Camembert and Pont L'Eveque and taste the heady beverage at the Monastery where Benedictine is distilled and search out a farm where le vrai Calvados is made. That's what I did but though equipped with school learned French most of what was said went sur ma tete. Heureusement - fortunately - I was also equipped with a travelling companion whose reprobate past included a period of wild living in Paris and consequently an ability to interact volubly with the indigenous Normans. While I stood tongue-tied, my companion parleyed away, shrugging, waving hands and even on one extraordinary occasion giving a fluent and exciting impression of a French maitre d'hotel.

Ah, I frowned, C'est bien for some... Well, now it's all right for me too. Because Coombe Valley Software, a couple of British teachers who weren't happy with the educational software around and who set out to make their own, are now distributing the highly-respected Audio Gallery range from the USA into the UK. And the first of this range of language programs for the Amiga that they have provided to **AUI** was - zut alors! - none other than French.

Audio Valley French comes on no less than eight disks; the system disk plus six unit disks and an extras disk. And though there is more than enough for anyone to study it's all kept so simple that nobody could feel overwhelmed by the amount of material.

Fundamentally what you get is a "scene". This is a fairly schematic representation of, for example, a room with each object in the room given a number. The pictures are not too excitingly drawn and look as if they were probably created back in the days of the A1000 - and possibly were. A clue to that may be that though the authors say it has been upgraded, it will still run on a half a meg Amiga.

When you click on the number - surprise, surprise - up comes the French for the object. You can click on a gadget for a translation and, as you would think from the name of the series, you can also get an audio version of the French word. Tres simple, n'est pas?

Echo

There are some neat extras you can try to keep the language lesson from getting boring. You can use a device called "echo". With this you can vary the output of the digitised speech to make some interesting effects. For example, with the "long" option, you can pretend that you are learning the French vocabulary in a large hall make the words blast out all around the walls. It does give you that touch of



French
English

le jambon

REPEAT

AUTO

BACK

Audio Gallery ~ French

Get ready to parler with Coombe Valley.

Audio Gallery FRENCH

**Martin Witton fresh from chasing
Camembert and swigging
Benedictine finds a program that
would have made the visit to la
belle France more understandable
as well as fattening.**

grandeur which is appropriate to French. (As the lyrics of the song say "The French don't care what they do as long as they pronounce it correctly." Or loudly, in this case.)

Audio Gallery will certainly help you to do that though what it needs, as all these language programs do, is some kind of a recording attachment to allow you to hear your own quality of pronunciation. What I did was use a cassette recorder to tape the sounds, deep, throaty, sexy sounds, emerging from the Amiga - which was giving a very recognisable imitation of my cocky travelling companion - and also my own astonishingly English accented attempts at these Gallic tongue twisters.

At first, I was horrified at how

unfrench I sounded but after using the program a few times I noticed a definite improvement. There was also an improvement in my vocabulary too. With the help of a quiz option I was able to test myself and saw a steady growth in the number of words I could not only recognise but also remember and get close to pronouncing correctly.

The fact that the system is so simple also makes it suitable for any age from, say, about six upwards. As we get older we are supposed to find learning things, especially things like languages, more difficult, possibly because our brains get silted up with so much more guff than they have when we were school children. The way the Audio Gallery system works, letting you

learn at your own pace, allowing you the options to repeat words, accelerate or slow down their order and even print them out to remind you when you are not actually in front of the computer, must surely help counteract the dying off of the brain cells - 50 million each day? - that's supposed to be one of the causes of our finding it harder to retain new knowledge.

Conclusion

The French I learned with Audio Gallery was almost effortless. The system has the seductive charm of the French language itself and indeed of many French people. It strokes you along until you feel confident of stringing together those words which were until now loitering on the edge of your mind they start to flow out with a pleasing fluency.

I may not yet be sure that I can do those shrugs and hand wavings with the Gallic abandon of my travelling companion, reeking of sophistication like French perfume, on that recent gourmet trip across la Manche. But next time, you can bet I'm going to be in there with a few Alors! and Mais ouis! and C'est vrai, cherie? Merci, Audio Gallery, merci beaucoup! **AUI**

Huit sur dix

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I arrived in Blackfriars in London for a one day seminar hosted by Premier Vision with none other than the great guy himself, Lee Stranahan. For those of you who may be scratching your heads and asking "Who he?", here's a warm welcome back and I hope you enjoyed your stay in the Outer Hebrides. The rest of you Lightwave Users will be aware that Lee Stranahan is the man with the Prince of Darkness beard cut and the cheerful - and very knowledgeable - banter on the Lightwave Essentials video which comes bundled with the program.

Now let it be said, Stranahan is a genius, not necessarily where operating Lightwave is concerned - he's pretty good at that - but where he excels above all others is in his capacity as a teacher. You think that the Essentials video was well rehearsed, scripted or whatever? Maybe so, but when you sit at the feet of this master he's exactly the same. He knows what he's talking about and it's a big favour you do yourself when you listen.

You only have to hear a few of the statistics to realise the calibre of this teacher. He's travelled 65 000 miles and taught Lightwave in 85 cities in the the US and Canada.

"I come from a long tradition of high school drop-outs," he declares, presumably to emphasise that Lightwave is designed to be used by ordinary people and not PhDs. "Most of the people working on Seaquest DSV have no graphics qualifications." The message comes across loud and clear: Lightwave is the gateway. "3D for the masses," as Stranahan puts it. The opposition are hopping mad and it's easy to see why.

The background info about Lightwave itself is of greater interest than you might imagine. It gives an indication of what to expect if the computer graphics industry over here moves the way it did in Hollywood.

No Flannel

The NewTek/Stranahan version is that when Lightwave was released, it blew away most of the other software overnight. A few stalwarts hung on with Imagine and Real3D etc but after a year or so they ended up switching because everybody in Hollywood seemed to be using Lightwave and whenever they went looking for work they were being asked if they could fly Lightwave. Now, although I was aware that Stranahan's job as a NewTek employee is to promote the product and although the old Mandy Rice Davies quip of "He would say that, wouldn't he?" occasionally came to mind I found that everything Stranahan said made

such perfect sense that my cynicism rapidly melted away. Lightwave is so good that you don't really need to push it like that. Stranahan's confidence isn't flannel. He just knows he's sitting astride a product which only needs pointing out.

What of the seminar itself? We spent a day in a medium sized room, not too cramped with Lee Stranahan working away on an A4000, the output of which was displayed on several normal monitors and one large projector TV, a well thought out set-up which ensured that you were always within easy reach of a monitor. Occasionally we'd get view some examples on VHS and apart from two coffee breaks and a very respectable lunch, that was it.

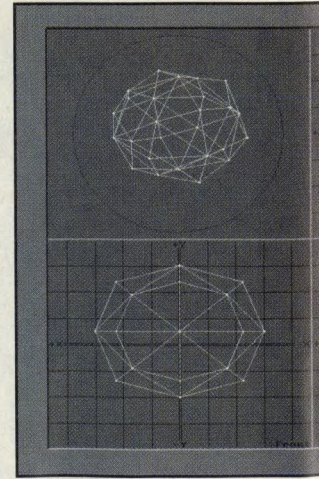
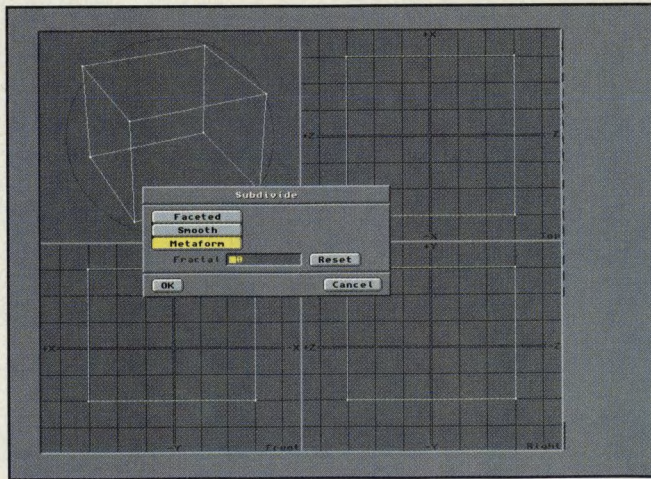
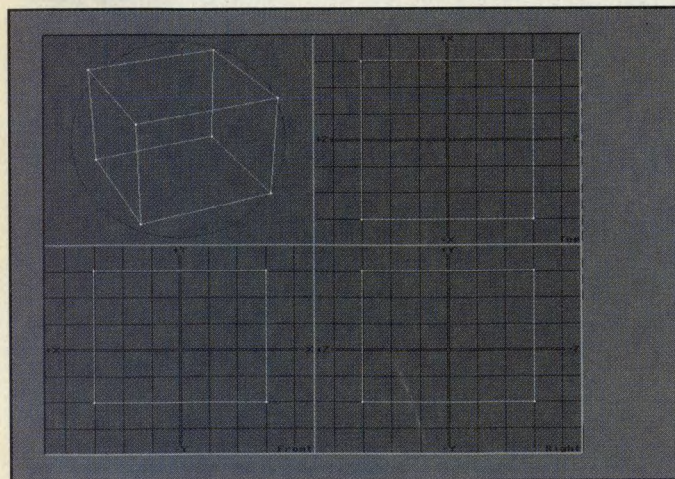
Originally I had expected to see something of Lightwave 4 but no. It has inverse kinematics we were told. It's due out sometime in the first quarter of 1995 but most of the work regarding the upgrade had gone into the porting of the package over to PC and SGI, disappointing for Amiga users who had been hoping for major sugar candy. The price is to be \$995, reflecting NewTek's objective as regards the opposition: "...to hurt them very badly."

Questions

What we did get was Stranahan offering us the chance to ask questions, interspersed with little

Lightwave Enter

A Day With Lee Stranahan



Stranham makes the bold claim that whenever his brother is asked to model anything (even the Statue of Liberty), he starts

tutorials which he had up his sleeve. We saw the famous manufacture of a car body from a group of boxes using Metaform and an animal head made using the same technique and which struck me as more impressive.

I had the impression that those attending the seminar quickly cottoned on to the fact that while it was valuable to have our questions answered, it was better to let Stranahan set the agenda. That way we had big surprises. The demo tape he showed us made me wonder what NewTek are playing at with their tutorial examples. Nothing I had seen on the videos, or anywhere else for that matter, had prepared me for the treat which Stranahan had in store for us. I'd been

really wanted to know, primarily because a potential client, when showing me a sequence on tape had said "We'll be interested in using you if your software can do this."

"No Problem"

To my chagrin there were one or two things which had me stumped and I wanted them ironed out so I could say "No problem!" to my client. Happily, Stranahan had an answer for the most puzzling. You have to be sure he understands that you have a good reason for asking something tricky though or he'll say, "I can't see why you'd want that anyway," and tell you some stories about how some people try to come up with "stumpers" for the sake of it.

of the 24 Bit Club who also attended the seminar. He was such a mine of information that he made me wish that I'd joined the his user-group years ago. Questions which had niggled me for ages and which I'd never got round to sorting out, things about Opal Boards, syncing, getting round little quirks that different combinations of gear can throw up, that sort of thing... He had an answer for every single question! It would have been worth the day just to talk to him so do yourself a favour and get in touch with the 24 bit Club. That's not a plug. It's a tribute to a valuable resource!

Praise should also go to the guys at Premier Vision as well for the hospitality. They were helpful and knowledgeable with it. As for their seminars,

Entertainment

raving over chopsticks. This was Rachmaninoff! Underestimate Lightwave at your peril. Terminator 2, water tentacles a la Abyss, travelling mattes, phasers, 3D airbrush streaks, it's all possible. One stunning demo sequence was dismissed by Stranahan with contempt. A car boot opens and out comes a little flying saucer which the camera follows as it flies across the room and out of the window!

"This is no use as a demo. Nobody can tell whether you did the car, the flying saucer or the room."

And that was what was so impressive. Lightwave could have done all of them! Even some of the ceilings in the spacecraft in Star Trek TNG were Lightwave modelled!

Realising that many of his audience had not owned their programs for long, Stranahan tackled a lot of modeller basics, clarifying things which the manual doesn't really cover adequately. A sizeable chunk of what he showed us can be found on Modeler 1 and Modeler 2 tutorial videos but I still think it's worth going over these things again, especially because a video can't answer when you suddenly ask "But what happens if...?"

I must admit I went with a few things that I

"Don't try to solve the world's problems," he says, pragmatically. "Get out there and make some money!"

It's such good advice. His best story was of the 3D artist who had found that there was a rendering error on three of his frames in something like a 10 second sequence. He'd tried again and again to rectify the problem. Stranahan's solution? "I told him to take those three frames into a paint program and paint the errors out."

We all laughed because I guess we all understood how computing has a way of making you lose sight of your objective.

Lightwave is a wonderful affordable tool but I didn't realise how wonderful until I'd attended the seminar down at Premier.

Plug Ugly

I don't plug anything. That's not my job - but what I will do is bring to your attention a few things worth knowing about. One is that you get to meet a lot of very nice people on a seminar like this - people who, like you, enjoy the Amiga and bring tremendous enthusiasm to the field.

Now I have simply got to thank John Campbell

well, you've read the article. I came away stunned and very excited. Sure, I would have liked at least a glimpse of version 4 but that was out of their control. Highly recommended.

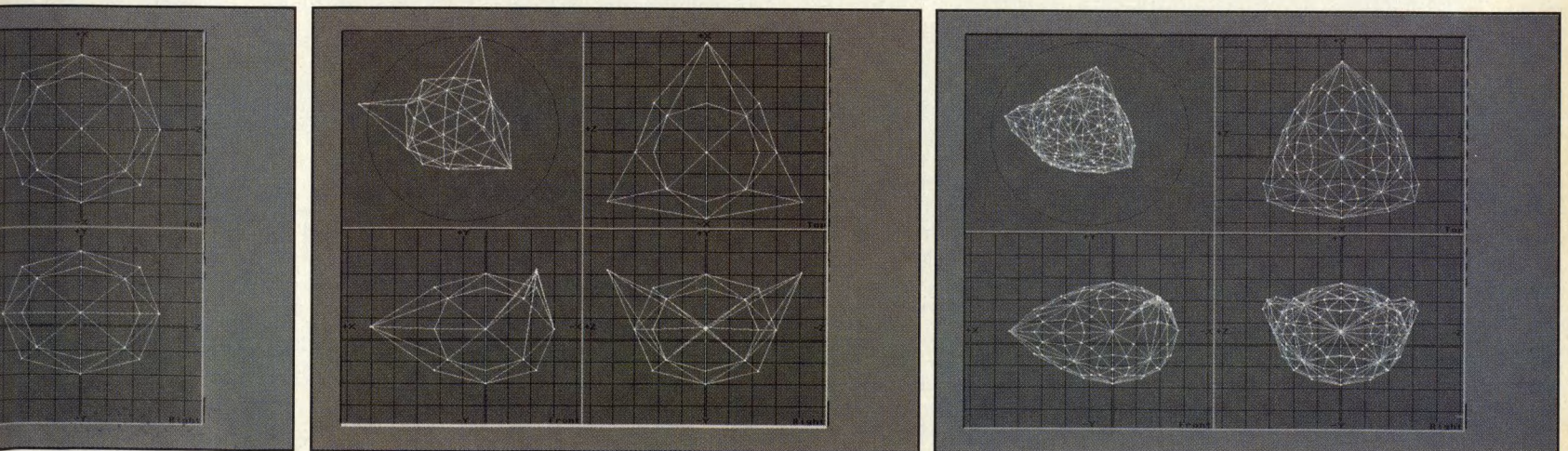
The Bottom Line

Presentation 10, Content 10, Value for money - tricky one, this. How much value do YOU place on this level of tuition? £100 is a drop in the ocean to some, a painful pocket-burner for others. It's good value for what it is and I couldn't fault Premier's hospitality. It's worth remembering as well that they do offer substantial discounts on their stocks to seminar attendees so in theory you could recoup your outlay by what you save. I'll give it a very respectable 8.

Premier Vision are planning more seminars and if this one is anything to go by, they'll be worth a look. **AUI**

INFO

Contact:
PremierVision
Tel: 0171 721 7050



with a box and uses Metaform. To prove it, here's a box transformed into a model of a teddy bear's head!

The Amiga Guru Book

For the last few weeks I've been burning the midnight oil reading a new English version of Ralph Babel's Das Amiga-Guru-Buch. It has been translated from the German edition which first appeared in 1989. My concern before I saw the book was that, as so often happens when highly technical material is translated, it might be let down by poor or inaccurate translation. But those responsible have done a superb job.

Although the English version of the book is new it does not cover very recent system enhancements (Workbench 3 and so on). It does, however, cover material up to and including release 37 of the O/S (Workbench 2.04) and so relative to many other Amiga books there is plenty of fresh material available.

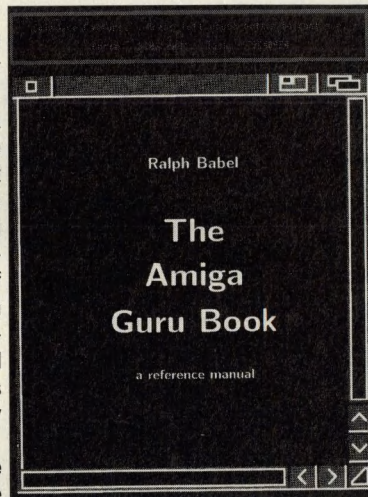
The second point is that this book is definitely not intended as a tutorial guide for beginners. It is a reference book whose intended readership is the competent C programmer who already possesses in-depth knowledge of the Amiga and its operating system. It has been written at a level where familiarity with, and preferably access to, both the Addison Wesley RKM manuals and the Bantam Book's AmigaDOS manual would be an advantage. Some 680x0 material is provided but in the main it is familiarity with C and the Amiga rather

Paul Overaa surfaced from a seven hundred and thirty six page marathon reading session dazed, but suitably enlightened.

cations which run out of stack space to allocate larger stack areas).

There is a good account of the purpose and layout of Commodore's FD files and, among other things, explanation of the use of various 'i' system file macros to create the data type and structure definitions used by assembly language coders.

Also in the first section are chapters on C programming with one in particular, on SAS C, containing useful accounts of the various compiling stages. Specific examples are based on the now relatively old SAS C version 5.10b but while things have changed somewhat with later SAS



More exciting than it looks.

RKM Includes & Autodocs manual. The last chapter in the first section of the book is on terminal debugging containing details of debug.lib, ddebug.lib, and ROM-Wack use.

Surprise

Although the book is clearly aimed at experienced Amiga coders some things about the early chapters did surprise me. The need to make a big point about busy wait loops needing

to be avoided in a multi-tasking environment seemed quite unnecessary given the intended audience. Similarly the several pages of listings outlining the functions which are normally used in pairs, eg AllocAslRequest() and FreeAslRequest(), seemed equally pointless given that this sort of system resource-release function information is always specified in the RKM function autodocs anyway!

The second section of the book is entitled System Internals. The three chapters here provide all sorts of 'goodies' including a variety of hardware memory map issues (real-time clock addresses and so on), start-up details, boottime initialisation procedures, boot block details and accounts of Alert/Guru numbers. Needless to say there's quite a lot of material that you'll not easily find elsewhere.

The third section constitutes the remaining half of the book and can be summed up in one word - AmigaDOS. This area of the book is a veritable goldmine for the advanced coder and there are good chapters on the AmigaDOS console handler, the command line interface, the AmigaDOS filesystem, BCPL and the Global Vector, DOS library functions, error codes, packet types, load modules and so on. There's obviously some common ground between material presented here and that which can be found the Bantam's AmigaDOS

manual but I suspect that the different style of explanations used by Ralph Babel will be appreciated by many coders in this technically difficult area.

Conclusion

The Amiga Guru Book is well written and includes plenty of useful references. As I read it I felt at times, and this is meant as a compliment, as though I were 'reading between the lines' of the official documentation. Chapters start with a smattering of (often amusing) quotes which, coupled with the style and the odd touches of humour, reminded me more than a little of Donald Knuth's books (Fundamental Algorithms etc). Being the cynic that I am I did in fact begin to wonder whether this might be a deliberate mimic!

I expect that quite a few of the so called "hints and tips" provided will be well known to more experienced coders anyway. For the serious coder however this book undoubtedly provides both good reference material and plenty of heavy but enjoyable, 'behind the scenes', reading. As one might expect in a single volume there are many areas of Amiga programming that are not dealt with at all. Nothing to speak of on Intuition or Amiga graphics and normal device and library content discussions are absent. So too are things like the use of BOOPSI, callback hooks etc. This is not a criticism as such - a single volume could not possibly deal with every aspect of Amiga programming. Most chapters provide one or more example programs to illustrate particular coding techniques.

The Amiga Guru Book costs £35 and though at first sight this may seem expensive you do need to bear in mind the fact that this book offers authoritative help in a number of important areas. As far as myself and many other serious coders are concerned, this book provides welcome additional reference material and it deserves to do very well indeed! **AUI**

The second section of the book is entitled System Internals. The three chapters here provide all sorts of 'goodies' including a variety of hardware memory map issues.

than with Amiga assembly language coding that is important.

Three Sections

The material is split into three sections the first of which deals with general Amiga programming and with some detailed, but very readable, accounts of Amiga header defined data types. This is followed with what might be called established Amiga programming guidelines.

Though there are the expected mentions of things like the importance of relinquishing system resources in the reverse order to which they are obtained (and plenty of other RKM-related discussions), material is also provided on such areas as dynamic stack switching (which enables appli-

releases the material is still of value in a general sense.

Of less interest is a chapter containing reference charts of the various SAS and Aztec C compiler and linker options because although the comparisons might be useful when moving code from one compiler environment to another nothing was provided that cannot be found in the documentation for the two compilers!

Chapter 7 deals with the amiga.lib library and this provides very interesting reading starting with details of the interface stubs that were used by C compilers prior to the days where direct, register based, library calling schemes became available. A variety of library functions are dealt with and you will find some functions, like TimeDelay(), that are still not listed in the most recent

INFO

The Amiga Guru Book
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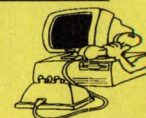


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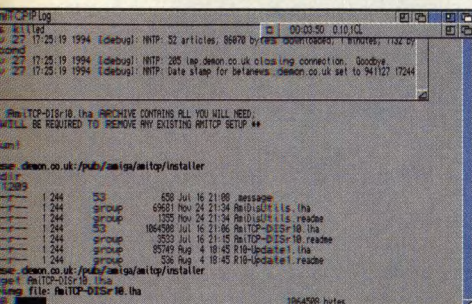
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On Line

Interested in getting on-line and surfing the net for news, friendly chat, help, information and files? All you need now is a modem and some communications software and you're well on your way.

We have reviewed a number of modems in the past and recommend the Supra 288 or the US Robotics DS V34 modem if you can afford it. If not, check out the Supra v32 bis or the US Robotics Sportster 14.4k. Ask the supplier for some comms software, or a PD library for Ncomm or JrComm which are both very good.



Downloading the AmiTCP archive from Demon's FTP site. To activate the status bar, type "Set ansi on".

Both of these programs allow you to dial up other computers using your modem. A good starting place is to dial one of the BBS's mentioned on the Coverdisk pages. You may have to answer some questions if you've never called these numbers before, but this

this means is that you've got to contribute a new program, music file, or picture to the BBS's library if you wish to take some of their files in exchange.

Accessing

Okay, you've played around with BBS's and now you want to connect up to the astonishingly large Internet for an unlimited supply of programs, news and advice. If you remember from last month, there are 3 main Internet connection suppliers for the Amiga. Demon is the only one which gives you full access to all of the Internet services, while CIX is limited to text only and doesn't give you point and click front ends with pretty graphics.

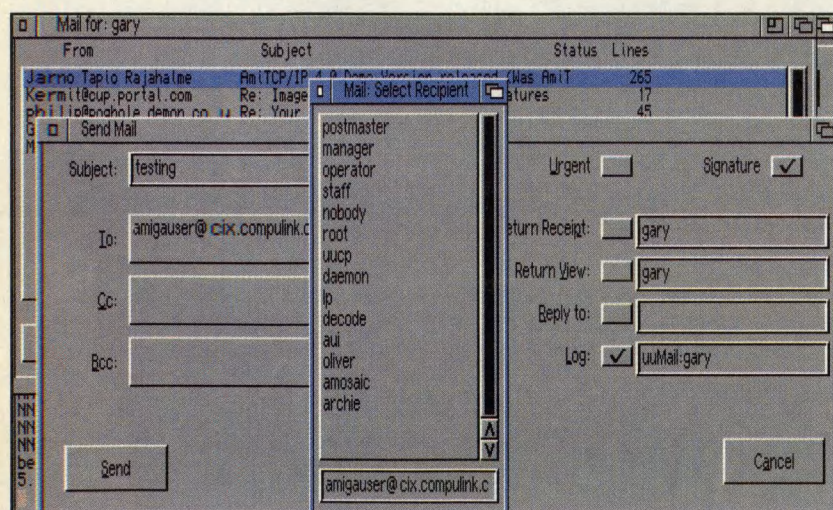
CompuServe also provide limited Internet access. They finally called me up to offer us an account so I can tell you guys how wonderful they are.

"Which computer do you want the CompuServe software for?" asked a young lady.

"The Amiga", I replied. There was a pause.

"We don't do Amiga software!", "Well", I said, "how do you account for CompuServe's very own Amiga conferences?"

Her reply was obvious. "I'll get back to you." I haven't heard anything since. By the way, they work out as the most expensive service if you intend participating in the main conference



Sending and reading e-mail with Demon is quite straightforward once you've set up AmiTCP.

is mostly a precaution to prevent troublemakers from abusing the service.

Most BBS's give you access to a huge catalogue of programs, music, and pictures. A lot of boards operate on the principle of "send us a file, and we'll let you have two of ours". What

areas including that of the Amiga.

Be A Devil

If you are reasonably competent with the Amiga and you know how to use the Shell then consider Demon, I recom-



Power Windows BBS, one of the best BBS's (in America!)

After last month's introduction to the Internet, Gary Fenton moves on reveals more of the joys of Cyberspace.

mend installing the AmiTCP software which literally networks your Amiga with the rest of the Internet. The latest version is 4.0 which costs £62 to licence.

is freely available (if you can't afford v4.0 that is).

Demon have written a special installation script for v3.0 which sets



Sending mail on CIX. CIX will tell you if there's new mail waiting for you.

There's a fully working demo of v4.0 freely available but it has an annoying reminder to buy the licensed version which pops up every time you run it. Rightly or wrongly, I recommend getting v3.0 which works very well and

the software up to work with Demon. I suggest you get hold of this. When you phone Demon to subscribe, they'll give you a phone number and a password with instructions on how to get hold of the AmiTCP software using your exist-

Starring Internet

Believing that Internet users would be an ideal audience for their hot new movie "Stargate", the film company put out a trailer where what they called the "technobuffs" would find info about the MGM SCI-FI epic, on the Internet. Apparently the publicity worked for within a few hours, Stargate was being avidly discussed on the Internet. The movie then took a cool £35 million in its first ten days on release in the USA.

Quick to grab the coattails of the idea, is Acclaim who are bringing out a Stargate computer game. They have done a deal with CompuServe offering CompuServe's nearly 2 million subscribers a preview of the game plus Stargate competition to win a copy of the game.

Stagat game designers are also participating in live on-line discussions about how the title was made.

Is this the beginning of the end of magazine covermounted demos of big games? And a new way to get "technobuffs" away from their computers and into the cinemas?

Comms Jargon

- BBS:** Bulletin Board Service. An on-line service offering files, information and chat.
- Download:** Transferring a file down the line from a host machine to your Amiga.
- Log On:** The term used when connecting to a host computer.
- Log Off:** The correct way to disconnect from a host computer.
- OLR:** An Off-Line Reader is a program which "scoops" messages and mail from an on-line service and allows you to browse through this information in your own time while off-line, saving you money!
- Surfing:** Jargon for looking around the Internet to find interesting things.
- Upload:** Transferring a file up the line from your Amiga to another computer.
- :-)** Turn your head sideways and you see a happy face called a smiley. (Colon, dash, close bracket) Use these funny characters to express yourself on BBSs and the Internet.
- ;-)** This is a winkey used to express a joke.
- :-)** This means sad, or unhappy.

ing comms software. Make sure to tell them you have an Amiga.

Dialling Demon

AmiTCP, and 99% of all files, are stored on host computers in a com-

```

if:q
f:j amiga
Topics are: '2news', '3hardware', '3listings', '3main', '4listings', 'aa',
'aminet', 'audio', 'cd32', 'cdtv', 'emulations', 'marketing', 'religion',
'sales', 'uucp', 'video', 'wb2'.
Topic? 2news
Joining amiga/2news 0 new message(s).
f:j consoles
You are not registered in 'consoles'. Would you like to register. (y/n)? Y
Topics are: '3do', 'cd-32', 'flames', 'for_sale', 'forcefield', 'handhelds',
'jaguar', 'sega', 'the_n_word'.
Topic? cd-32
Joining consoles/cd-32 100 new message(s).
if:
Reading next unread.
=====
consoles/cd-32 #86, from gmsimpsona, 88 chars, Jan 15 00:31 94
Comment to 82. Comments.
-----
I've never heard any speech on Diggers, when should I listen out for it?
Graham

if:
cd-32

Comm 2.0          CIX          13:12 00:05
  
```

Joining a new conference on CIX. If you get stuck type "help".

pressed format using Lha, Zip, or Arc. We use Lha for the coverdisks (the most popular Amiga archiver) so make sure you're familiar with this software. After unarchiving AmiTCP, run the installation program and follow the prompts. You'll need to tell it your ID address which Demon will give you. Be sure to make a permanent note of this.

To run AmiTCP, you must execute the StartNet script, or allow the installation program to put it in your user-startup script. When this is running, type "Link Up" into a shell. (Don't type the quotes and it's not case sensitive). Link and StartNet can be found in the AmiTCP:bin directory. Demon will be dialled and AmiTCP will automatically log on for you.

To send or read e-mail, just type "Mail". Mail is a program with a respectable user interface and is quite self explanatory. To send mail, click on Send and type in the full e-mail ad-

dress of the recipient. Some text will be created by the program when it loads up your text editor. Ignore this and type your message in at least one blank line after the last line. When you're done, save, quit, and click on Send.

Getting Your CIX

CIX is a lot easier to use and I recommend it to anyone who's too scared to use a Shell or doesn't need all the facilities which Demon provides. CIX has this nice cosy feeling to it because of the local conferences and the people are generally very friendly. If you're interested in CIX, contact them at the number shown in the Contacts box, or you can join while on-line. To do this, dial CIX (using any comms software) and when asked to "login" type "qix". Next you'll be asked for your nickname so just type "new". You'll be greeted as a new user and asked some basic questions. It'll generate a nickname for you, like gfonton, but you can make your own up like "amiganutter" or "musicman".

There are many areas on CIX but to begin with imagine just two. There are hundreds of conferences

Contacts

With Demon, the joining fee is £12.50 and there's a monthly charge of £10 (plus VAT). There are no on-line fees so all you pay is your usual phone bill. Demon's voice number is 081 349 0063.

CIX costs £25 to join and there's a minimum monthly charge

of £6.25 (plus VAT). You must pay for each minute you're on-line to CIX which is currently 6p peak and 4p off peak, plus your usual phone bill. You can join by calling 081 390 8446 (voice) or have your credit card ready and join while on-line on 081 390 1255 (modem).

under different names like "amiga", "consoles", "multimedia" etc.

Each conference is made up of one or more topics. There are many topics in the Amiga conference which can be list if you decide to join one of them. Type "join amiga" and CIX will list all of the Amiga topics. Next type in the name of the topic you want to join, like "2news", or "3main". You can join a topic using one line if you know its name: "join amiga-3d/lightwave". This joins the LightWave topic in the amiga-3d conference.

Hit return to read the next available message, or type "n" to go to the next topic. To comment to the current message type "comment". When you have finished commenting type "." (full stop) on a blank line and return. This tells CIX you have finished typing your message. At the next prompt just hit return to add your comment.

Accessing e-mail is done from the Main prompt. Type "q" (for quit) if you are at the Read prompt and then

type "mail". To send mail, type "to" followed by the full e-mail address. If your recipient is a CIX member then just type in their nickname.

When you have written a message type "." on a blank line and press return. At the prompt "Send/action" hit return and your message will be sent. To leave CIX, make sure you're at the Main prompt (type "q" if you're not") and type "bye".

All of this is covered in CIX's excellent ring bound manual. Last month I mentioned two OLR programs which can save you a small fortune in on-line charges. To obtain an evaluation licence for Nicola mail "Tricky", or for Lucy mail "Toby" and politely ask for an evaluation licence for Nicola or Lucy respectively. If you get really stuck, mail me - "garygfx".

Next month I'll be explaining how to navigate around CIX and the Internet in more detail. I'll also answer any questions I receive by e-mail. Happy surfing, cyber dudes! :-)

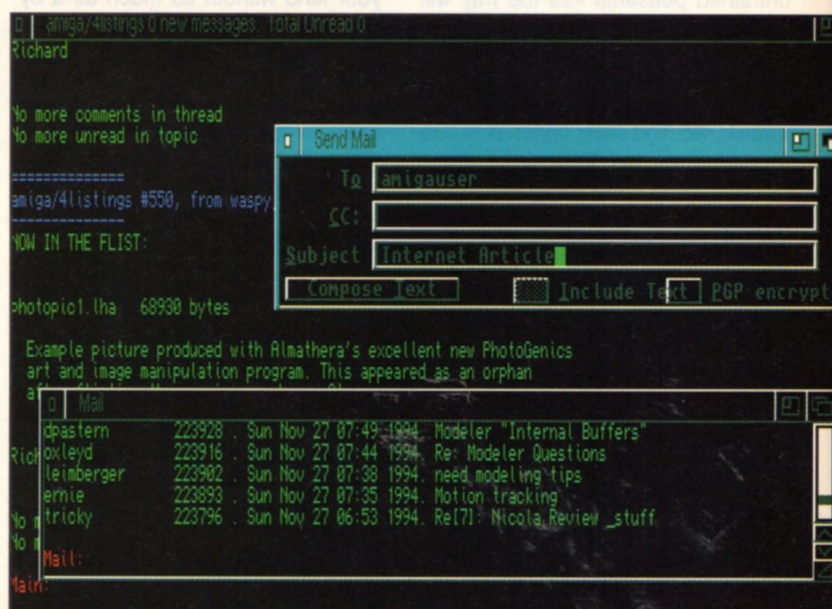
AUI On-line

If you have any news, comments, letters, or technical questions, you can contact AUI directly using this e-mail address:

amigauser@cix.compulink.co.uk

Or you can join our amiga_user conference on CIX, or contact me personally using e-mail:

gary@auimag.demon.co.uk or garygfx@cix.compulink.co.uk



Nicola lets you use CIX without the expense of being on-line as you read your mail and conference messages.

LORDS OF THE REALM

Author David Lester pays unashamed tribute to the classics Defender Of The Crown and Kingdoms in his program notes. He felt that there was plenty of scope to produce a splendid game that not only consisted of gaining territories and defending your population, but also included a proper land management game and an impressive castle builder. Something that Interplay's Castles failed to do. You start out in control of one of the 32 counties of medieval Britain with five other opponents, either human or computer controlled, with the aim of mastering the whole land and becoming king.

To do this you have to become involved in four different aspects of the game. The first is to win the respect of the people who serve you and keep them contented and well fed. Within your county, you get 16 fields which can be used either for growing wheat, or grazing cattle and sheep. As each season goes by your fortunes will change. Your crops need to be planted in spring (when also most of your livestock will be born) and harvested in autumn. Crop rotation will be needed to allow fields to regenerate, and this is taken care of by the program. So, a well fed and fairly taxed community will support you. Their mood is represented by the number of hearts displayed; get five and your in business, under that and revolts will break out. You must tax your people to gain revenue for buying food after a bad crop or buying materials whenever a merchant passes by.

The second factor in your success is in building an army. Drafting untrained peasants into the fray will not do wonders for morale, let alone put a dent in the enemy. You'll need to supply them with proper weapons. Iron needs to be mined and then made into swords etc. The other option is to hire mercenaries, but they don't come

Impressions £35.00 1200 only



The overview of the kingdom is a good starting point.

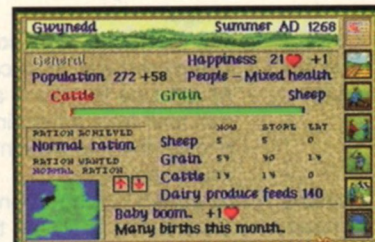


A close up of your area reveals all.

cheap. The third factor is in castle-building. Without them, your enemy can just toddle along and take over your land without as much as a by-your-leave. Early on you can only afford a humble construction, say an outer wall and keep. Eventually you get to build a very impressive home, something that will frighten your enemies to death, not to mention your

finance minister who will have to pay for its upkeep.

All through the game you need to change your workforces. Come harvest time you will need hundreds of workers to bring in the crops whilst only a few will need to watch over the growing fields. Attacking another county will take a very large army, as that county will automatically staff up



This is a summary of your sheriffdom.

every person to defend it. The rewards however are worth the bloodletting as you obviously get more people and more land to grow even bigger and richer.

This brings us on to the fourth option - the siege. This intrinsic part of medieval combat requires you to lay siege to your opponents' castles with all manner of weaponry including catapults and battering rams. This aspect of Lords Of The Realm is so tactical that a separate manual is given over for it. Creating war games is what Impressions do best, so you would expect this level of complexity. By the time you get to this stage, you would have been well into the game and more than happy to sit down and think out a good siege strategy.

A lot of thought has gone into this game, and they have succeeded where Defender Of The Crown failed. Lords Of The Realm covers just about every aspect of a medieval war game that you could wish for and then some. **AUI**

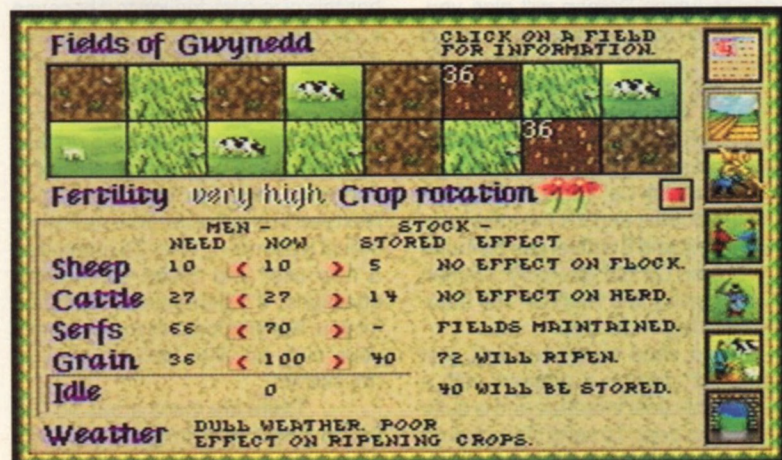
VERDICT

Graphics:	87%
Sound:	67%
Gameplay:	95%
Overall:	91%

Your steward gives you reports of your accomplishments.



You must set out the land under your control so that it is used effectively.



Premier Manager 3

Gremlin £25.99

Premier Manager has been like George Foreman. Just when you thought it was at the end of a successful career, it pops up again in a recharged version and socks it all the others. George, God bless him, has confounded the pundits and done it yet again. This version of PM, sadly, will not. It's time, as they say, to hang up your boots, old friend.

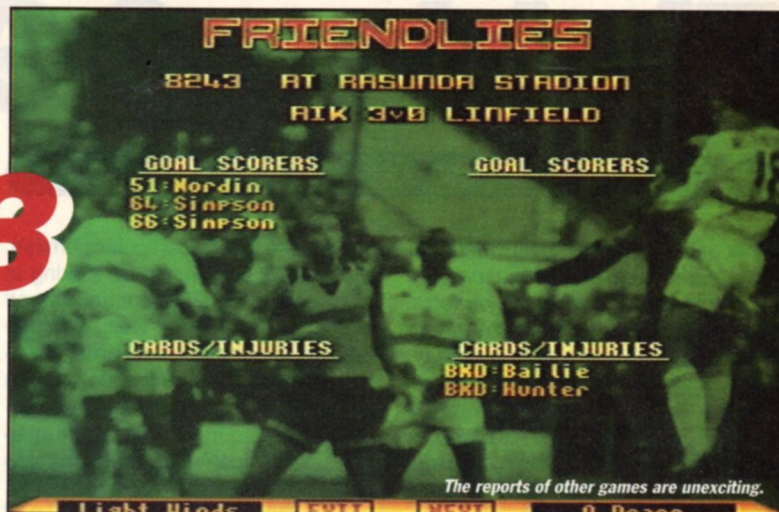
Now before you all shriek at me with outrage at what will probably be just as good a seller as the previous two - and at the time of writing stands at Number One in the Charts - let's put my remarks into context. How many times can you begin a game as manager of Frinton Rovers, end up winning the double and go on to great European competition! Doing this once demands a place in football management's hall of fame. Doing it twice makes you God of Soccer. You should be able to port your archive achievements across to Version 3 and continue running your top Premier team. You can't.

The second point is that Gremlin are asking you to fork out another 26 quid on a

game that is basically the same as you have already owned twice, albeit with a few extra features. An upgrade option for loyal customers would be a much fairer way for Gremlin to continue the PM dynasty.

With those gripes off my chest let's talk about Premier Manager 3. If

you aren't familiar with the previous incarnations, take it for granted that they were footie management sims light on tedious number crunching and heavy on the fun. The third version provides more of the same, with many new features - some good some markedly poor. The overall feeling I get is that Gremlin have taken away all the simple fun elements which made it so popular. Take the team squad for in-



lowly division the players simply won't have the skills to maintain anything so clever, and you could find them hopelessly out of position. You also control the passing, running and shooting using a percentage system. So, someone with the passing skill of Glen

forwards to take long shots, or wait until they see the whites of the goalie's eyes!

This whole process can take ages to set up, and any substitution can involve you in even more tactical juggling. There is a major flaw in the game's design here. You have no idea of the corresponding strengths and weaknesses of your opposing team's members or tactics. This means that all of your patient tactical juggling could be meaningless. Gremlin suggest that you save the game before any major match so that if you lose you can rejig the formation and try again until you eventually win!! Ridiculous.

To add to your frustration, the in-game display is not a patch on the previous releases. Little Subbuteo-type men move jerkily about the pitch with action windows occasionally popping up to signify a goal attempt. You can turn off the players and have only the ball moving about the pitch but that just looks stupid. Thankfully, many of the original features are retained, like the phone for you to dial up staff, bank manager etc. This time, you even get an assistant who will run certain parts of the day-to-day work for you.

The basic game engine is the same as previous Premier Manager releases, but wrapped around it now is a much more complicated set of options which dramatically reduce what made it so playable in the first place. When you compare it to Ascon's 'On the Ball', which was designed from day 1 to be a realistic management sim, for me there is no comparison. **AUI**

The opening screen won't come as a surprise to fans.



stance. Every player can now be given individual instructions regarding position and passing. The pitch is divided into 12 squares and you can define where each player will be when the ball is in any particular square. In a

Hodde would have an 80% passing and 20% running label, with orders to make the pass long, short, or medium, and where on the pitch to pass it, left, right or centre, and how high low or normal to do it. You can instruct your

The new look of the game itself is hardly awe inspiring.



The ground improvements screen has been updated - a little.



VERDICT

Graphics:	60%
Sound:	50%
Gameplay:	57%
Overall:	56%

Fields of Glory

Microprose £35.99

For a company who has made its name in the air, it is unusual that this game is firmly set on terra firma, in days long before the great flying machines were even a glint in Orville's eye. Fields of Glory centres on the brutal close quarters combat of the Battle of Waterloo. The game is split into four real battles, and two fictional ones, and you are free to play either side in all of them. Waterloo was an unusual battle, because the French, having been born again through Napoleon escaping from Elba, took on not only the English but also the Prussians, by driving a wedge through the middle of both forces.

This is a combat sim for war-game enthusiasts but offers no long lasting challenge for battle hardened veterans of the genre. Using a system called CQCS (Close Quarters Action System) you can view the battle in three scales, with the closest being so near that you can actually see the effectiveness of different formations during attack and massed cannon fire on the infantry. Troops advance, fire their muskets and then charge into the enemy flashing cold steel. Unlike other war games, except maybe Cannon Fodder of course, the real carnage of war is graphically depicted, with bodies of soldiers and horses and smashed equipment littering the field of battle. At this close quarters level it's just a question of counting the holes in the ranks to see how many casualties you've inflicted and taken.

This three scale option cleverly portrays the utter confusion of war in those far off times, by sucking you

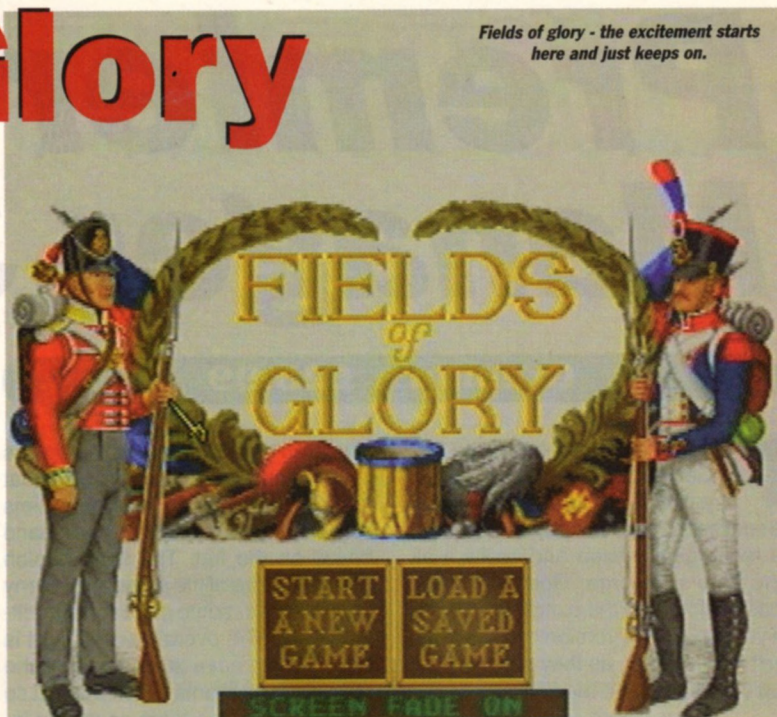
into a close up of a particular skirmish, when really you should be looking at the overall picture. The control method seems to work fairly well, although pop up information and orders windows tend to obscure the play screen and you find yourself moving the command box around to get at the map underneath. Icon stalks down one side of the screen would have been better.

The action is in real time, and that causes many problems. For instance you could be looking at one part of the battle, concentrating your forces to make a determined push and successfully winning, only to find that a neglected division at the other end of

Choose your side in the real or fictional battles.



The battles do look a little like 'North and South', and it doesn't seem to have advanced much either.



Fields of glory - the excitement starts here and just keeps on.

bridges. This, of course, becomes meaningless nonsense if you can just paddle across a river anywhere you like!! Also battles can last up to 20 hours, with no unit reporting fatigue, or the day turning to night. So, in effect, the landscape is there just for background and plays no part in the actual battle. This is just plain stupid for a war game, because it means the level of strategy required is severely reduced. Lastly, you can wipe out a battalion, but you can't kill the horse mounted commander. This leaves loads of useless officers riding around the battlefield doing nothing at all.

Fields Of Glory could still be hailed as the best wargame of the year, simply because it is fun to play a part in one of the biggest battles in history, and graphically it deserves it. Unfortunately, give it to someone who takes wargames very seriously, and the cracks will become all too evident. **AUI**

the battle has been wiped out. This of course happened often in those days, because commanders simply did not have effective means of communication. Waterloo exaggerated this problem because of the sheer size of the battle.

With all its complexity and graphical detail, Fields Of Glory is fatally flawed in a number of places. In everything but the hardest levels, the enemy can be crossed as though they don't exist, which as far as the program is concerned, they don't. This comes to a head in one scenario, The Battle of Wavre, which is supposed to be a bitter struggle for control of the

VERDICT

Graphics:	87%
Sound:	78%
Gameplay:	56%
Overall:	67%

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AMOS Professional	24.99			EMERGENCY ACTION 49	A500/CD32	19.99	On The Ball-World Cup Ed	A1200	22.99	On The Ball-World Cup Ed	A1200	22.99	SKIDMARKS UPGRADE	12.99	Simon The Sorcerer 2	A1200/CD32	26.99			
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AMOS Professional	24.99			EMERGENCY ACTION 51	A500/CD32	19.99	On The Ball-World Cup Ed	A1200	22.99	On The Ball-World Cup Ed	A1200	22.99	SKIDMARKS UPGRADE	12.99	Simon The Sorcerer 2	A1200/CD32	26.99			
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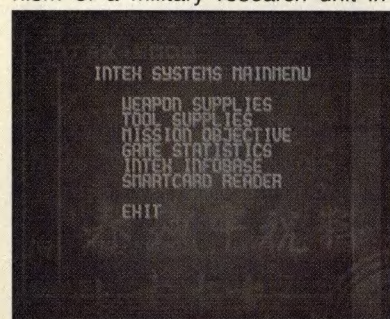
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ALIEN BREED - TOWER ASSAULT

Alien Breed was one of the few games to make me physically shudder as the opening credits and music oozed ominously out from the screen. Skin crept as my character walked along the deserted corridors of the space centre, awaiting the inevitable appearance of a creature right out of the Aliens movie. It had atmosphere, tension and, although a tough challenge, was immensely playable.

After a series of update versions comes a completely new mission: Tower Assault.

One or two players are sent down to set off the self-destruct mechanism of a military research unit in-



The Intex system is back on-line.

festated with an Alien Breed. It's a huge, 50 level complex crawling with the vicious crustaceous vermin we love to hate. You start off in the outer grounds of the base and make your way into the two small side complexes, with the eventual aim of entering the main central tower. The levels vary between open ground (mined and equipped with bezerk lazer cannon), living quarters, science and engineering labs,



Team 17 £19.99 All Amigas & CD32



and prison and military levels.

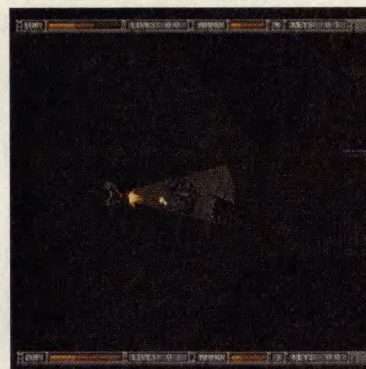
It is very clear that Aliens have infested the base. Upon entering the buildings you surprise some of them feeding, complete with grisly sound effects, on the dismembered bodies of base personnel. Bits of people are scattered everywhere - including women still clutching their babies - a graphically sick but 'accurate' touch which is bound to upset some people.

In addition to new Alien manifestations like invisibility and a cocoon stage you also have to contend with the bases' own security systems, which

They're coming through the floor - it's Game Over man!

Emergency, Code Red. You are about to die.

have gone haywire. On certain levels, security robots are after you along with the Alien Breed, while lasers and rapid-fire cannon attempt to drill you full of holes. Some levels are without



I'm in the dark on this one.

power. So you're in the dark, searching for the tell-tale blue eyes with only a torch to guide you.

What has always impressed me about Alien Breed is the non-linear play method. If it were a real situation, there could be a number of ways of succeeding or dying. Realism is therefore assured by having more than 250 ways of completing the game.

My favourite new feature is the "retreat" mode. If the Aliens are a little too close, you walk backwards, firing at the blighters as you retreat. This small, but valuable addition saved my life a number of times.

There are only two gripes. The aliens utter a death cry which sounds just like a pigeon cooing. The rather pathetic noise is hardly spine-tingling stuff. There is also a frustrating infrequency of opportunities to save your

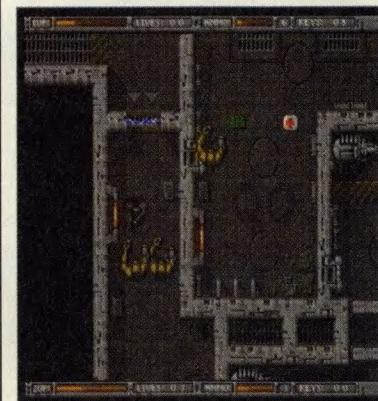
game position for resumption at a later date. Occasionally - after completion of particular levels - a special code is given which enables later entry into the same point of the game. In the original Alien Breed you could do this at any Intex terminal. Offering only the miserable code method was a very bad decision.

After squeezing through a number of dangerous levels before dying, the thought of having to do it all again was just too much, so the game was sidelined for a couple of nights before I tried it again.

Although I did indeed try again, had it been the original game, I would have rebooted immediately, eager to plunge back into the hellish depths. This time I was less inclined. Maybe I'm just getting older. Maybe the programmers are. Maybe the game is.

In creasing out the age wrinkles and pepping up the game, Tower Assault has lost the atmosphere which made the original Alien Breed so special. That may be a little unfair to say, since someone new to the series may find it very thrilling. But even with all the additional features, that special edge which makes the game feel only a few nervous steps from reality was missing.

But Tower Assault maintains the Alien Breed saga standing as one of my all-time top shoot-em up games.



Twin demons of death - Aliens and robots.

It's you against the despicable scum and you take their efforts to kill you very personally. That is the secret of a winning game.

VERDICT

Graphics: 90%

Sound: 74%

Gameplay: 95%

Overall: 90%

MARVIN'S MARVELLOUS ADVENTURE

21st Century Entertainment
A1200 £29.99

Pizza's are hip at the moment. The Lital Divil had to get one from the depths of hell for his village elders and now Marvin has to deliver pizza to a kidnapped professor. OK, so they are rather naff plots, but it's the implementation which counts.

Lital Divil couldn't turn brilliant graphics and sound into a worthwhile game. In contrast, Marvin's Adventure has taken the most over-used scenario - platform games - and created a very playable and enjoyable game.

The platform game scene is very crowded, and many of the potential players use consoles, rather than the Amiga. A newcomer has got to be impressive to make a dent and Marvin's Adventure could well do that.

It's all the more impressive because the game is filled with high risk ingredients for a very average

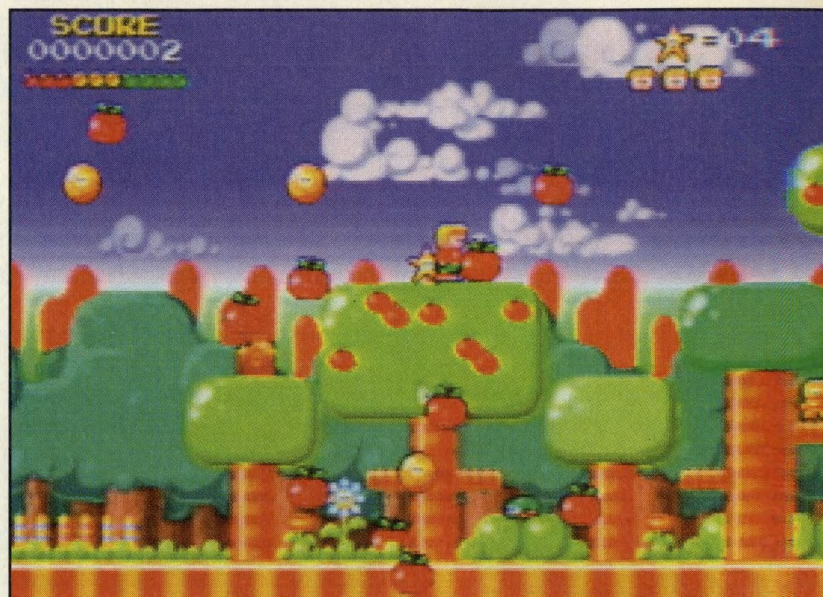
game - it's a platform, the sprites are large and colourful and it's simple.

In many ways it holds to the platforming tradition. There aren't too many gimmicks or programmers' flights of fancy. In other ways it has given new life to an old format.

You play Marvin, the pizza delivery boy, who stumbles upon the Dark One kidnapping an eccentric inventor. You have to travel through alternative dimensions to find and rescue the professor (reviving him with a scrummy deep-pan pepperoni with extra cheese). Then you must retrieve a microchip which will trap the Dark One in these stupid rainbow-coloured worlds until his mind collapses from the cuteness of it all.

The screens are chocka with stars, apples, tomatoes (?) and other bonus things which explode in a cute array of tinkly sprinkles when you jump for them. The requisite baddies are there, sliding or creeping in the undergrowth. And of course, there are plenty of various types of platforms to jump between. In addition, there are extra sub-games - bonus levels for extra points. At first I was sceptical about the potential. I'm not the type of person at which this game is aimed. Yet even I was impressed.

Hardened strategy and shoot-



A sprinkle of pixie dust, stars, apples and tomatoes?

em up battlers and those aging souls who remember the Vic20 might be way past this type of simplistic game now, but there is a wealth of young ones out there who will love it.

I don't know how they've done it, but Marvin's Adventure has captured the essence of what makes a good game for young players. It isn't simply the bright colours or simple play. Every slice of the program has been lovingly tended to produce those little touches which raise a game above the masses. It isn't so hard that players will be turned off, and yet the puzzles and prizes are interesting enough to verge on the addictive.

In case you think I've gone too far in being nice to what could really just be yet another platform game, I ought to state that the game has nothing radically new or appetising which revolutionises the genre.

It just presents a platform romp in an exceptionally capable way. If I were a platform addict, or had kids, this game would reside on my hard

drive. Which reminds me - a hard drive is probably something for which you'll be thankful. The game stretches to four full disks and runs off only one floppy drive.

21st Century have gone overboard on the promotional hyperbole, but the game lives up to many of the extravagant claims. It doesn't just look and sound good, it is very playable. The kids will love it.

For a limited time there is a free mug with each game. You certainly wouldn't be a mug if you got yourself a copy of MM Adventure.

VERDICT

Graphics:	92%
Sound:	82%
Gameplay:	88%
Overall:	88%



Sometimes it's so cute you just wanna puke.

DEATH MASK

Alternative Software

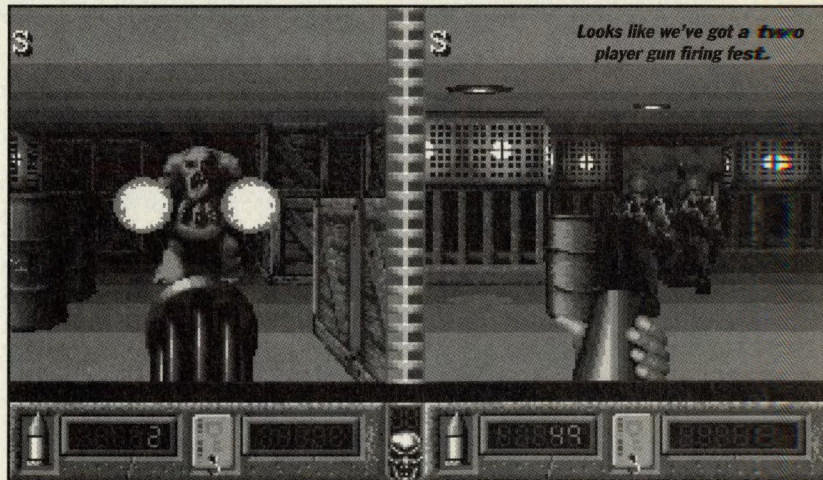
DOOM comes to the Amiga wearing a different name tag - DEATH MASK. Alternative Software took a considerable risk by

Make room for Doom, or rather, Death Mask.

not getting the game out in time for a review in this month's AUI, but they did get us some advance screen shots.

A lot of Amiga users have been drooling for Doom - they can now get

Ahhh, the arsenal of my dreams.



their hands on the next best, or maybe better, thing. Take a look at the screen shots and dribble until we bring you a

full review in the next issue.

Remember, "It ain't safe to buy until you've checked with AUI!"

Sim City 2000

Maxis A1200/4000 only £34.99
5MBytes hard drive/4MB Ram Required

Well, just take a look at the specs required to run this little beauty. It's heralded as "the ultimate city simulator" and you can't expect such a complex engine to run on a slow machine. Even on the A1200, which isn't exactly a slouch (OK, it's not the fastest thing on Earth either), the screen update can be painfully slow.

Remember though that this is not a game where the action comes thick and fast; you do have time to think through your actions.



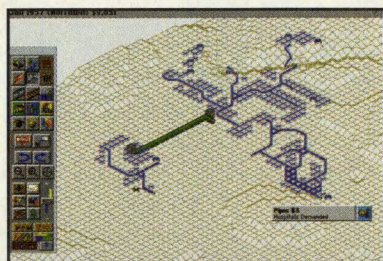
The overview shows that my city isn't the biggest ever.

So, with all this in mind, what's the actual game like?

Initially, you feel a little swamped with the options and amount of things to consider, but a few test games and a dip into the tutorials will set you more at ease.

It must be said that actually trying to work through the tutorials isn't the best idea, as you start to get events thrown up before you should encounter them and end up flicking through the manual anyway.

The premise of the game is the same as the other "sims" - build a successful city that attracts the



My underground system is set up and running.

citizens. To do this, you need to set up three zones, a residential, industrial and commercial.

You then give the people power, roads, rail, bridges, water supply, all the things you take for granted in your own town.

When you've done this, some sims should start moving in and starting some businesses. It's important to remember that each part of a zone will need power; roads and water will split up zones.

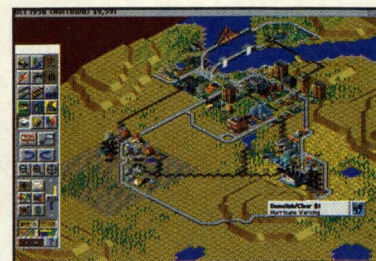
When everything is going smoothly, it's an idea to raise some funds by issuing bonds to your sims. Then you can build stadiums, schools and the like which will make your city the people's choice.

There are several screen modes, one that shows how your city looks and one that looks beneath the surface and shows your underground network of pipes and tunnels.

On top of this, a newspaper will report your progress and the budget and other areas will be reviewed on separate screens. The whole game plays like a PC Windows run program. That's not necessarily bad, but it puts a strain on the processor. Still, nowa-

days if a game doesn't look the part, it won't make the sales. Sim City 2000 is superb. I wish it wasn't so slow, but that's the price you pay. The levels of complexity and involvement make this the best simulation game since Civilisation.

If you're an A4000 owner, then it's a treat beyond compare. If you're a beefed up A1200 owner, then you'll have fun and time to sip a coffee or ten as you play.



It's just a small city, but I like to call it home.

VERDICT

Graphics:	90%
Sound:	50%
Gameplay:	80%
Overall:	85%

Pussies Galore

Team 17 A1200 CD 32

PREVIEW



"Mrs Slocombe, get your pussy off my lap!" "Oh, it's all right Mr Humphreys, she's just showing affection." It's time for all those classic innuendos to be pulled out of the closet and sniggered over. Team 17 have announced the Spring release of a new platform game, Pussies Galore. They claim the game will combine humour with graphic originality and innovative gameplay. Judging by the advance screenshots, they could be right.

You take the part of Boris the streetwise alley cat. There's no time to paws for thought or take a cat-nap, there are stray cats to save from Evil Eric - who has cast a spell over the hapless kittens. It's up to you to prove

Cute and colourful cats and kittens a.k.a Pussies galore!

you're top cat by completing several missions in each of the four worlds by finding the kittens and guiding each of them to their separate exits.

Rescued kittens can be assigned tasks which Boris cannot complete. How about turning them into suicide kitties by strapping on high explosives and sending them to face level guardians? You can send them through tunnels or use them as feline fuses, completing a circuit to make machinery work.

The whole catbuddle is bundled together with 64-colour screens and parallax and 50-frames per second scrolling. Looks very promising.

My sims have everything they need, from police to museums.

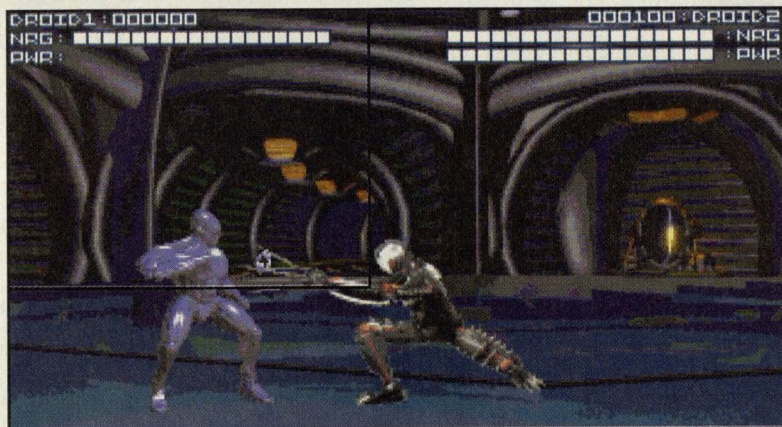


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Rise of the Robots

Mirage/Time Warner A500/A 1200/CD 32
£39.99/£42.99/£34.99

Well, it's arrived at last. Accompanied with an impressive TV campaign. And some powerful backing. The real pleasure about this game is that it is an attempt to push forward the way games are conceived. On the CD32 the game starts with a rendered intro, which we've seen before. However, when you enter the game itself, you note immediately that it's a beat 'em up with a lot of wrapping. But what wrapping. It's time to face facts that most games are only rehashes of others, although you do start to wish that games companies would make some effort and at least change the engine.



Rendered to perfection? Cinematic, but lacking depth.

There are very few types of game. All you can say is whether the game is well crafted or not. Rise of the Robots, in case you've been away for a year, is a beat 'em up played out with rendered graphics. Everyone moves with grace and beauty. After you beat your way through the opponents, a cinematic sequence moves you on. Why is this so good? Well, I admit that we've seen it before, but this time it's actually done well. The problem is that while Rise takes a step towards the interactive movie with one foot, it takes a step back with the other. There can be no pretence made. This game sur-



It's still a beat 'em up.

rounds you hitting your opponent. Couldn't something more have been done? I've got no answers as to what, but I didn't design the game. Still, with Mortal Kombat II storming the charts, beat 'em ups are popular and this is a good one.

VERDICT

Graphics:	96%
Sound:	80%
Gameplay:	80%
Overall:	90%

WORMS

Team 17
All Amigas

PREVIEW

Continuing the schoolground innuendo Team 17 are now promoting their upcoming (ooer) release of a game called WORMS. With such unimaginative lines as "Just how HARD is your WORM?" Team 17 are digging the clummy depths of desperation for publicity angles. They claim WORMS is "The HIT GAME of 1995". Unless they have a time machine, that's a stupid and inane claim to make.

Still, Worms might actually be quite good. AUI is reserving judgement, but like the early bird, we'll take a look at a WORM in the privacy of our office and report back to you in an upcoming issue.

Valhalla - Before the War

PREVIEW

Vulcan Software £34.99

PREVIEW

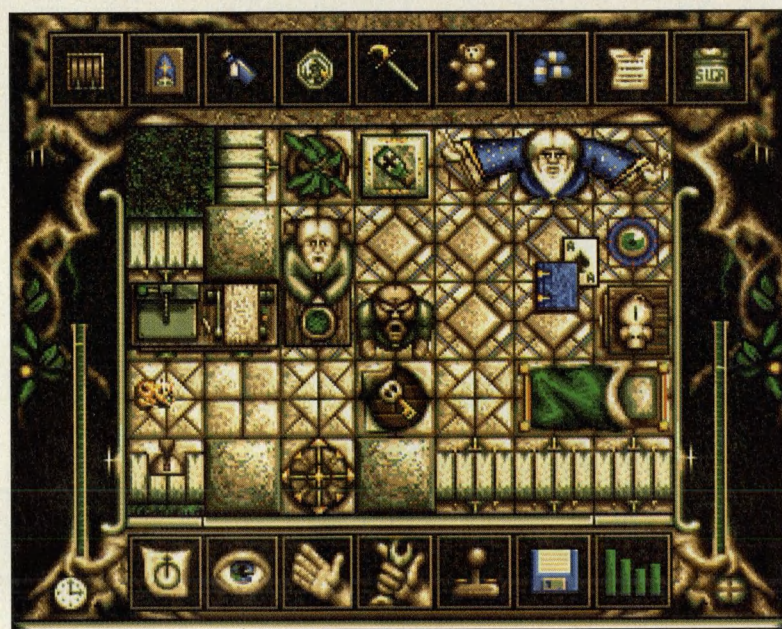
OK, so this is the story so far. You all know Valhalla, "the first ever speech adventure". It was to be followed by a two-level budget prequel to "Valhalla and the Lord of Infinity". That has now become a full price four level stand-alone game called "Valhalla - Before the War". The war bit is the next exciting installment - but that is a story not yet written.

Vulcan Software cannot be faulted for their efforts at keeping the Amiga media informed. Your friendly AUI staff have been inundated with information about progress on the game. We took a look at some early preview disks of levels one and two, and were impressed, but not gobsmacked.

You get an overhead view of your character, the mentor of the Lord of Infinity, who plods around a castle looking for things to move up to higher levels. Apparently you have been jealous of your brother Garamond (who looked up their fonts list for a name then?), the King of Valhalla, for a long time. So you're on a quest of hatred, with murder as the ultimate goal. OK, fair enough - we play the scum-bucket.

The game consists of a straightforward attempt to figure out the various puzzles. The solutions include giving items you find to various people, using Vaseline on a snail, bringing luck to an Oracle. It's that type of thing.

The key to any adventure game are the puzzles and those in Valhalla



They've spotted me watching them from above.

are tempting challenges. Many puzzle-adventure games collapse because the solutions are simply stupid and make no sense. Valhalla's mysteries are well thought out and constructed - they will keep you entertained for days.

Two irritating aspects about your character include the convincing, but frustratingly slow walk, and unfortunately, the speech. The 1000 word speech vocabulary is promoted as one of the positive aspects of the game, but quickly becomes annoying. The game really comes to life when char-

acters speak to you (along with the actual lip movements) but if you don't turn off the "non-essential" speech, you will soon be screaming at the fist-clenching habit your character of looking up at you and saying "I can't do that" or whatever.

The preview disks looked good, if a little sparse, but there is a lot more work to be packed into the final product. If you liked Valhalla or are a sucker for a solid puzzle-based adventure, then Valhalla may be worth a try.



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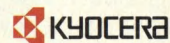
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PROGRAMMING TIPS

Paul Overaa reveals a sneaky way to tell whether Intuition is sending your program menu events whilst your program.

Someone wrote to me recently to ask how a program could tell that a user had selected a menu option when the program itself was not sitting in the message handling loop that monitors such events. The program in question was having to perform a relatively long winded file conversion job and what was needed was a way of allowing the user to abort this operation during the time it was being performed. These 'user activated' escape/cancel facilities are quite commonly needed and there are therefore established ways of providing them. Before seeing what needs to be done, let's first look underneath the surface of Intuition's menu handling to see what's going on.

Programs which use menu events will normally set up a window with an IDCMP (Intuition Direct Communication Port) attached to it. Intuition handles the job of sensing that a user has selected a menu and when such events occur it automatically sends your program a message containing details of the event. Under normal circumstances, when your program is looking for these messages, your program will collect and reply each message as it arrives and then go off and do whichever function the menu event corresponds.

The key point here is that at the time your program goes off to carry out its allotted task the IDCMP port will be empty. If any time after that the user selects another menu option Intuition will sense it and send your program another message, duly attaching it to the IDCMP port. What happens here though is that, if your program is off doing other things, the message will just sit at the IDCMP port being effectively ignored.

Checking

What we need then is some way of quickly checking to see whether the IDCMP port is empty whilst we are in the middle of doing other processing and if you look in the `exec/list.h` system header file you'll find a macro called `IsMsgPortEmpty()` which allows you to do just that. The important point about this macro is that it is fast, so it is unlikely to add any significant overhead to your routines (particularly if you only check the port every few seconds or so).

The trick then is to occasionally look at the IDCMP port to see whether it is empty or not. If it is then you carry on with your processing. If it isn't the (more time consuming) job of collecting and handling the new event can be done and at this time you'll be able to tell whether the new event corresponds to your escape/cancel option and act accordingly.

MENUNULL Snag

The only problem that needs to be tackled is that of false menu events, those `MENUNULL` messages which occur when the user starts to make a menu selection but then has second thoughts and decides not to make any selection at all. In these instances Intuition sends the program `MENUNULL` events and obviously your program would just want to ignore these and carry on regardless. The way to handle this is simply to check the code field of the collected `IntuiMessage` and, if necessary ignore it.

Listing 1 shows a typical piece of IDCMP port checking code which is part of a Midi file event playing loop. In this case all menu items except a 'cancel option have been disabled and so if the event is

not `MENUNULL` then I know automatically that the user has chosen to cancel the file playing operation.

This being so on seeing a non-empty message port I collect the message and providing it's not a false (`MENUNULL`) event, put up some text blocks which tell the user what's going on and set the loop counter to its maximum value so

that the file playing loop gets terminated at the next iteration.

So, perhaps surprisingly, peeking into an IDCMP message port is not that difficult a task. If you study the example code and get to grips with the overall principles it should therefore easily be possible to apply similar schemes to your own programs! **AUI**

```
if (!IsMsgPortEmpty(g_window_p->UserPort))
{
    message_p=GT_GetMsg(g_window_p->UserPort);

    class=message_p->Class;

    code=message_p->Code;

    GT_ReplyMsg(message_p);

    if (!(code==MENUNULL))
    {
        WriteBoxText(&intuitext);

        KillSounds();

        ClearBoxText(&intuitext);

        WriteBoxText(&intuitext);

        Delay(DELAY);

        ClearBoxText(&intuitext);

        i=event_count; /* force exit from higher level processing loop */
    }
}
```

Listing 1: A typical piece of IDCMP message checking code

ARexxx Info

AUI's resident ARexxx guru Paul Overaa provides more help with random access file use.

The last article's Setup.rexx program enabled us to create a data file definition 'header' file along with a main file containing initialised (blank) data records. Our first task this month is to produce code that is able to read the header file data back - because this will enable us to identify the number of fields that each record contains along with the individual field names and sizes.

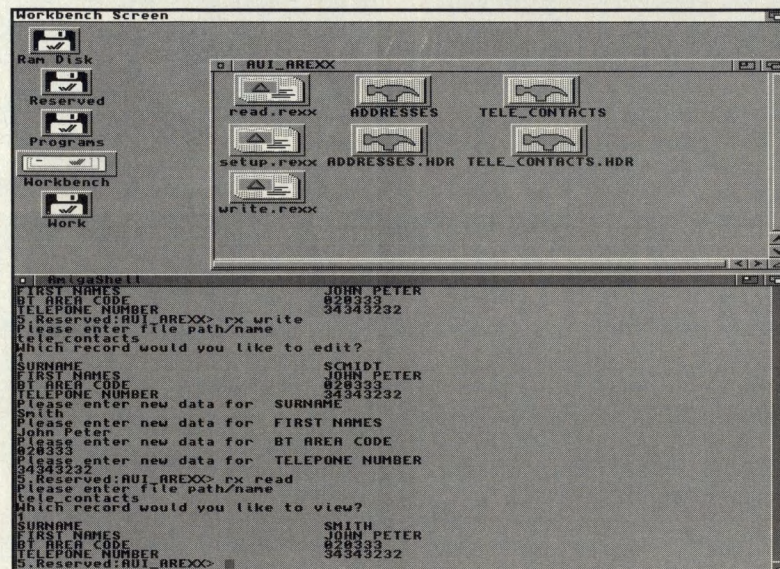
Listing 1 shows the script fragment that handles this work and the important thing to notice is that we are using compound variables to create the ARexxx equivalent of subscripted arrays. We open the file, read the count of the number of fields, and then use a do-end loop to extract the corresponding field names and sizes with the relevant items being placed directly into compound variables called field_name\$.i and field_size.i. During the loop portion of this section notice that we are adding up the various field sizes - this is to identify the size of a complete record because this is going to be needed to calculate Seek() positions later. Once the last header field (the initialised record count) has been read the header file, since it is no longer needed, is then closed.

Viewing Records

Although we have not talked about writing data yet it is easiest if we first explain how records from the main file can be retrieved and viewed. It's actually quite easy because if we collect a record number (n) from the user and we know the size of the random access records being used then we can move directly to the start of that record by using this sort of Seek() operation.

```
call Seek(main,(n-1)*record_size,'B')
```

The (n-1) expression, as you'll doubtless remember, occurs because users like record numbers to begin from 1 whereas the first record in our main file would actually start at position 0. Listing 2 shows a typical read/



This month's scripts could easily be extended to create a flat-file database utility

display routine and notice again the use of a loop in conjunction with compound variables. One piece of loop code which may need a little additional explanation is this:

```
say field_name$.i
Copies( BLANK, 30 -
Length(field_name$.i)) field$.i
```

This is printing the i'th field name extracted from the header file along with the contents of the i'th field of the main data file. The Copies() expression in the middle is just there to provide a tidier display - we've assumed that field names are not going to be more than 30 characters long and so have just padded those field names to 30 characters using blanks so that the real field data items all start at the same position on the screen.

```
say 'Please enter file path/name'; pull filename
if Open(header,filename$.i|.hdr,'r') then
do
field_count=Readln(header)
do i=1 to field_count
field_name$.i=Readln(header)
field_size.i=Readln(header)
record_size=record_size+field_size.i
end
record_count=Readln(header)
Close(header)
call ReadMain()
end
else say 'read.rexx failed'
exit
```

Listing 1: Extracting information from a header file containing the record definition

Writing Records

Listing 3 shows a routine for writing records and, as you might guess, it also involves a compound variable based do-end loop. As the various new field items are collected they are padded to the specified field size (originally retrieved from the header record definition) and then added to the record like this:

```
ReadMain:
if Open(main,filename$.i,'r') then
do
say 'Which record would you like to view?'; pull n
call Seek(main,(n-1)*record_size,'B')
do i=1 to field_count
field$.i=Readch(main,field_size.i)
say field_name$.i Copies(BLANK,30-Length(field_name$.i)) field$.i
end
Close(main)
end
return
```

Listing 2: Reading and displaying record data from the main file.

```
record$=""
do i=1 to field_count
say 'Please enter new data for ' field_name$.i
pull field$.i
record$=record$||Left(field$.i,field_size.i,BLANK)
end
call Seek(main,(n-1)*record_size,'B')
call Writech(main,record$)
```

Listing 3: The routine for writing new data to the main file

```
record$=record$||Left
(field$.i,field_size.i,BLANK)
```

Once all the required fields have been collected a Seek() is performed to move the internal file pointer to the correct position for the record and the new data stored. This may sound complicated but it is done with just two lines of ARexxx like this:

```
call Seek(main,(n-1)*
record_size,'B')
call Writech(main,record$)
```

Disk Examples

You'll find example scripts for reading and writing specified random access records on this month's cover disk (they're called Read.rexx and Write.rexx). Both need to be run from a Shell window using the rx command like this:

```
1> rx write.rexx
```

Do remember that these scripts have been written specifically to work with the Setup.rexx program provided in the last article.

This means that you should first use Setup.rexx to create a data file definition before using this month's scripts.

If you're stuck for ideas then try defining a file called 'tele_contacts' containing the four fields - surname, christian names, BT area code and telephone number (using say field sizes of 20,20, 10 and 10 respectively).

Once the file has been created then use write.rexx to store data in selected records and read.rexx to view records. **AUI**

THE PD STAKEOUT

Scoring

The marks awarded to each PD disk are based purely upon its own merits and, of course, our personal views. Value for money and reliability are also taken into account as well as features and quality of the software.

Compatibility

The PD disks reviewed in this issue were tested on an A500 with Kickstart 1.3. Please check with your PD supplier that the disks you are ordering are compatible with your Amiga. Amiga Plus, 600, or 1200 owners should be aware that roughly half of the software in the public domain will not work with Kickstart 2 or 3. Always ask first.

PD or ShareWare?

All freely distributable software comes under the rather deceiving umbrella of "public domain". Quite a lot of this software is, in fact, shareware. Shareware means that if you like the software, or use it regularly, the author will request a reasonable donation from £5 to £20. There is usually a note on the disk informing you if the software is shareware or regular PD. Whether or not you send a donation to the author depends totally upon your level of conscience and morals. Remember, if you send a donation to the author, you may receive an updated version of the software. Even if you don't receive an update, you will have given the author the incentive to continue contributing into the public domain.

Online PD

95%

Klondike II Deluxe AGA

You may wonder why the authors of this program decided to use the word Deluxe in the title. Well, all you have to do is load up the program and you will find out! You will also see why an AGA chip set is required to run it.

The presentation is astounding. But the original Klondike was amazing too so what makes version II so much better? Well, not a great deal

has changed from the last release, the graphics are still top quality, the music chugs along agreeably. What is different is the small menu which allows you to change, among other things, the screen resolution and which card set you want.

Previously, you had to do this by pressing certain keys. This you can still do but a menu is a lot more convenient.

Klondike II comes on 3 disks and has to be installed on a hard drive. Once there, it takes up about five megs of space. It's essentially the game Patience. There are two card sets included on the disks, with many others available, including Return of Jedi, various glamour models, Star Trek, the list continues.



Magic Selector

Online PD

85%



The author of this useful little utility had already installed Magic Workbench and wanted a program that displayed a different background, and played a different sample each time he booted up, so he wrote one to do the job. It works quite well and is controlled by way of a nice little preferences program which sits in your Prefs drawer. There are a number of different backgrounds supplied on the disk which were rendered using the excellent Forge and look very attractive considering they are only eight colours. Well, there's dithering for you!

TOMCAT

Online PD

This game arrived on 6 disks and requires about 5 1/2 megs of space on your hard drive. It is claimed to be the Amiga's first software full motion video game. It needs a fast hard drive to load the short anims, or alternatively, if you haven't a fast hard one, you can load it into RAM, but you will need about 10 megs!

Tomcat is a very basic game accompanied by some very small B/W poor quality anims. Even though the quality of the anims is not that good, they are quite smooth and animate reasonably well.

The aim of the game is to intercept and destroy enemy Migs. This is first done by selecting a waypoint with the joystick. You can then see a Mig graphic flying against an anim background. You move the joystick over it and then another anim is played showing if you have hit the Mig. It is good enough fun first time around, but the game is very basic and the animations soon become tedious.

65%





Wheelie

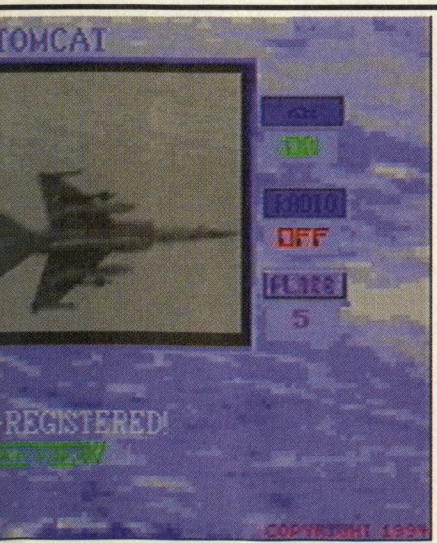
Disk F1-053
F1 Licenceware

I have fond memories of playing the game Wheelie on my old ZX Spectrum. It was a special game as, unlike many others, it had an atmosphere, an extremely eerie one. I don't know what made it so eerie, this Amiga rendition doesn't make my spine tingle any more, perhaps it is just my age, I am a lot older now!

You control a motorcycle and have to travel to meet the dark rider and destroy him. There are obstacles on the way including ice, and jumps which you will have to travel over. To do this you have to be at the right speed. When you are over the ice, you must not alter your speed otherwise

you will skid.

You must also be at the right speed when you make the jump. Too much and you will fly off your bike, too little and you will not make it. This is a classic game and is a must see for those of you who once enjoyed it on the Spectrum.



Disk F1-048
F1 Licenceware

Erik is a very basic platform game, and there are very few new ideas here. But it is quite well programmed, it plays very well, and the graphics are very well drawn. The object is also very simple, and rather boring, just make your way to the exit on each level.

There are, of course, creatures which are trying to kill you. These can be killed by pressing fire until the weapon Erik is carrying kills them. A diamond, or some sort of jewel is left behind and this is collected and can be used as money to buy new, more powerful weapons. If you like platform games, then this is a good one to get as it is easy to play and looks pretty as well.

80%

17 Bit Phase Four

17 Bit

CDs really are an amazing storage media. 17 bit have squeezed every one of their disks (over 3500 so far) onto four CDs. This latest collection contains all of last year's disks which are numbers 2801-3351. Also included are all the Assassins game compilation disks so far from 1 through to 141.

One of the best things about this CD is the presentation. It will boot from both the CDTV and CD32 and upon loading you will be presented with an excellent selection screen which allows you to pick which disk you want. After selection, all you have to do is put a blank disk in Df0, and press return.

Most of the disks on the CD have been archived using DMS so the data is written straight to the disk track by track and is therefore very fast. This system, arranged by the excellent Almathera, works flawlessly.

If you have the other CDs in the series, then this will complement them, but you are left wondering why 17Bit did not wait until a few more disks in their collection were available. I say this as the CD is only 338 megs full. I think probably 17Bit wanted to release a disk for people to buy at Christmas. You can't complain though, CDs can store so much data, it would be foolish to expect every release to be full to capacity.

90%

STAR TREK THEMES 2

Disk OM45 Online PD

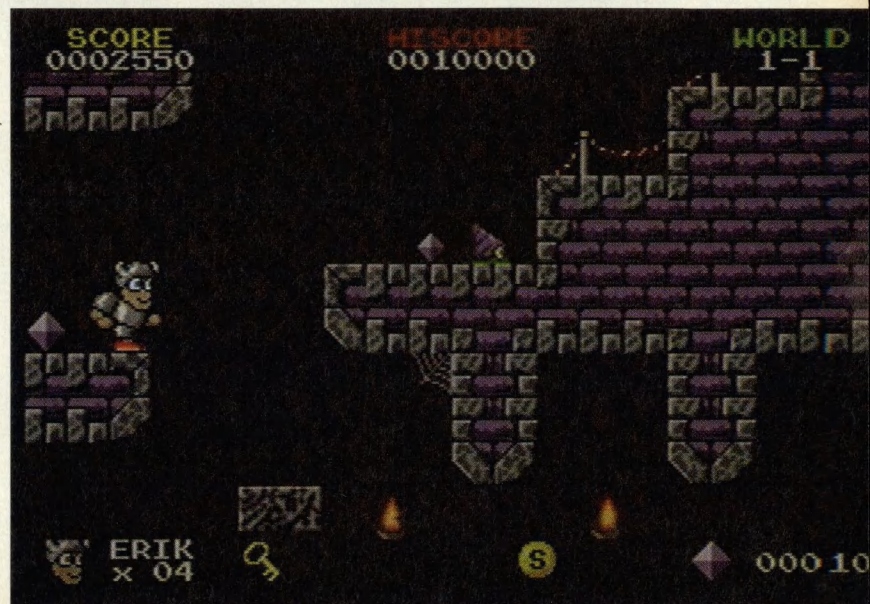


I just cannot see the point of these disks even for the biggest of Trek fans. First of all you have to choose between

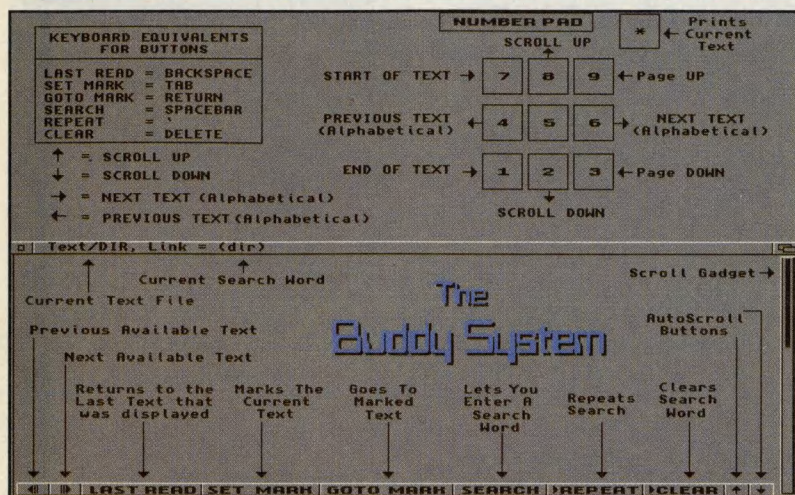
the old series and the Next Generation. All you get is a sample of the theme tune accompanied by some rather bad HAM pictures of the crew. The same goes for The Next Generation. I cannot see any use for this unless you are very very sad. The author is including the new Trek show, Deep Space Nine in his next update, I can't wait.

45%

ERIK

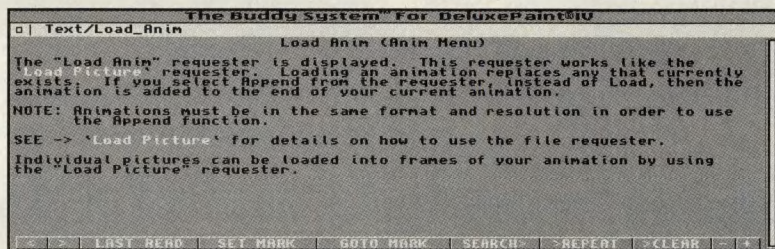


BUDDY SYSTEM V4



Exclusive PD

Have you ever found DPaint difficult to use? I have, OK? When it comes to paint packages I find most of them rather difficult to get into. You can try reading the documentation, but have you seen the size of the DPaint manual? What we need is a tutorial which will show you simply how to use the program.



Well, here it is. Buddy system, when run, will load up Deluxe Paint and also a separate help screen which actually looks a lot like Deluxe paint. To use Buddy, all you have to do is select one of the icons, or menu items and you get back some information on what that particular feature does. There are also a few demos and pictures which explain everything clearly. If you have trouble using Dpaint then you won't find a better way of learning than this system. WWE have reviewed the Buddy system before as a full proce package and welcomed it then as a valuable aid. Let's hope more useful "Buddies" come along on the PD scene.

90%

Flummy Utils #1

Disk OU64 Online PD



I am sure there is no such word as "Flummy", but no matter, on with the disk. The utils on it include a small program which turns off the hard drive's motor after a set amount of time. Why do this? Hard drives have a limited life span. What? I hear you cry, when, and how? Don't panic, the life span is considerable, but if your machine is on all of the time and the hard drive is not in use for that time, for example if you have a BBS, turning the power to the hard drives off would save on their wear and also save power. This util, however, has only been tested on an A1200 with a Conner drive. The author also says its use is at your own risk!

WBflash is a good but pointless utility, in fact, let's called it a hack because that is a more accurate description. All it does is make your WB windows and icons both flash and cycle through various colours. People will either love this or find it highly irritating.

Other utilities include a program which tells you if your telephone is ringing, a lottery predictor, a Directory Opus like program, and a virus killer.

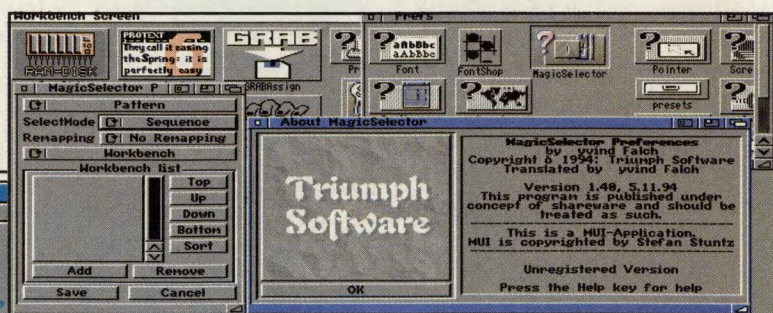
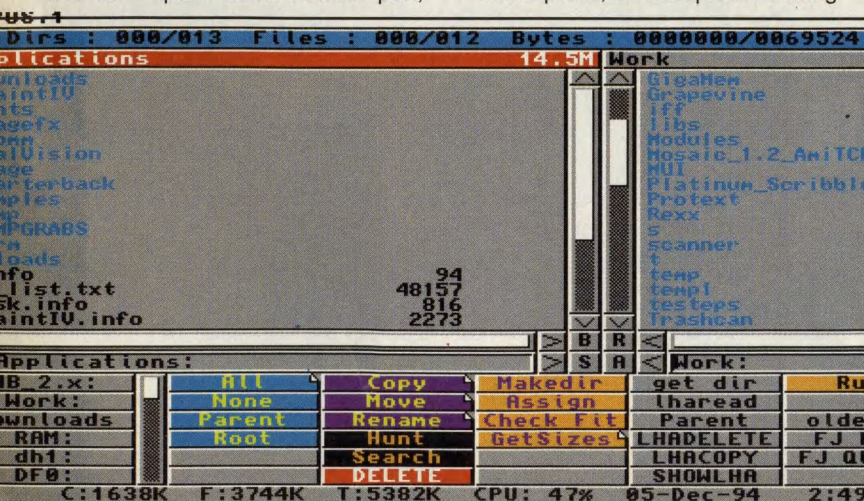
85%

MAGIC DOPUS COMPANION

Anyone who owns a copy of Directory Opus will tell you it is one of their most used and indeed best utilities. Its beauty is in its customisability if there is such a word! This disk will enhance Opus via the use of various add on utilities, and as DOpus has an AREXX port,

Disk U410 Scribble PD

many wonderful things are possible. There are several scripts included which will allow you to use Opus with Twin Express, convert pictures using



Adpro, use Virus Checker to check certain files selected with the mouse, and use advanced features of LHA within Opus.

Also included are a couple of Opus Icons for use with Magic Workbench. All in all a must have disk for Directory Opus users who want to get the best from this excellent program.

95%

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GAMES

18th Hole
(CAT 225 – 2 DISKS – NOT 1200). This is a very good looking overhead golf game. Good multi player fun.

3D Games Series
(CAT 849 – 1 DISK). Includes a brilliant 3D adventure game, which is absolutely huge.

Act of War
(CAT 267 – 1 DISK). A very good Space Crusade style strategy game with three missions to do, and an array of weapons.

Advanced Hero Quest
(CAT 1920 – 1 DISK). Let the computer be the game master, and provide the challenge. You need the board game to play.

Deluxe Galaga
(CAT 1974 – 1 DISK). A true classic as far as shoot em up games go, and fantastically professional with it. Re-live some arcade nostalgia now.

Diplomacy
(CAT 1909 – 1 DISK). A very competent computer version of that great board game.

Gnu Chess
(CAT 2042 – 1 DISK – NOT 500). A very good looking playable chess program. Easily one of the best around.

Golden Oldies
(CAT 1308 – 1 DISK). A wonderful collection of arcade classics from the early days. A good nostalgia trip.

Grand Prix 93
(CAT 2692 – 1 DISK). A surprisingly deep and highly involved management game.

Gush
(CAT 1209 – 1 DISK). This is probably the best version of Pipemania you can get. Very playable and very addictive.

High Octane
(CAT 680 – 1 DISK). This is a corking overhead car racer for two players. It's full to the brim with thrills and spills, and plenty of weapon pick ups.

Jellyquest
(CAT 2336 – 1 DISK). A sort of Q-Bert puzzler, and a good one at that. Quite headish.

Klawz the Cat
(CAT 1735 – 1 DISK). This is a lovely cute platform game, with classic gameplay.

LCD Dreams
(CAT 1789 – 1 DISK). A collection of four old LCD hand held games re-vamped for the Amiga. Great stuff.

NO I Mine 1
(CAT 920 – 1 DISK). A clever Boulderdash game, with mind boggling puzzles.

NO I Mine 2
(CAT 454 – 1 DISK). More of the same, with tons and tons of frustrating levels.

Pop Quiz
(CAT 2250 – 1 DISK). Test your knowledge of pop history with this pop-tastic quiz.

Red Dwarf Quiz
(CAT 887 – 1 DISK). Test your knowledge of the TV series with this Dwarf-tastic quiz. It's very tough indeed.

Road to Hell
(CAT 565 – 1 DISK). Yet more overhead racing in yet another great game. This time you can customise your car as well.

Starbase 13
(CAT 1213 – 2 DISKS). This is an epic graphic adventure with lots to solve. It's very playable, and quite funny.

Survivor
(CAT 330 – 1 DISK). This is a pretty good RPG type adventure game. Simple in play, but hard to finish.

Tetren
(CAT 66 – 1 DISK). Tetren is a very good Tetris clone. It features a good selection of new oddities, and two-player option.

Mr Men Olympics
(CAT 1890 – 2 DISKS). This is a lovely game for kids. It features great graphics which match the original very well.

Total War
(CAT 1043 – 1 DISK). A brilliant version of the board game Risk. Six players computer or human compete, and battle.

Wizard Wars
(CAT 2959 – 1 DISK). This is a very polished RPG type board game. Quite involved and pretty tough to win.

ALL THE DISKS LISTED ON THIS PAGE ARE COMPATIBLE WITH ALL AMIGA COMPUTERS UNLESS OTHERWISE STATED

USEFUL

600 Business Letters
(CAT 291 – 1 DISK). Lots of letters for lots of things.

Account Master
(CAT 1817 – 1 DISK). A good little accounts program to help keep your books.

Amibase Pro 2
(CAT 293 – 1 DISK). Probably the best database program you can get. Very usable indeed.

Astro 22
(CAT 2120 – 1 DISK). An excellent program to help with your astrological predictions.

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(CAT 2847 – 1 DISK). Produces very detailed planetary information for astronomers.

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(CAT 1863 – 1 DISK). A true collection of classics that you really should have.

Create Adventures
(CAT 1027 – 1 DISK). A very nice authoring program.

Crossword Creator
(CAT 2161 – 1 DISK). Takes the strain out for you.

Crunchers disk
(CAT 1227 – 1 DISK). If disk space is getting tight then this disk is definitely for you.

D-Copy 3.1
(CAT 2582 – 1 DISK). The best disk copier you can get.

Dynamic Skies
(CAT 1512 – 1 DISK). An amazing night sky viewer which is feature packed.

Easycalc
(CAT 1042 – 1 DISK). Simply the best spreadsheet.

Edward Pro 4
(CAT 2071 – 1 DISK). A brilliant text editor which has a very good feel about it.

Forecaster
(CAT 607 – 1 DISK). If you're a betting man/woman, this disk could be up your street.

Grinder
(CAT 1249 – 1 DISK). A versatile screen converter.

Hyperdrive
(CAT 1116 – 1 DISK – NOT 500). Creates a protected RAM disk.

Mandelmania
(CAT 820 – 1 DISK – NOT 500). A very fast fractal generator with fast zoom in and out.

Mandelplot
(CAT 90 – 1 DISK). An excellent shareware fractal generator. Tons of fractal types.

Magnum
(CAT 2666 – 1 DISK). A good disk magazine creator.

Opti Comms 2
(CAT 2375 – 1 DISK). An excellent collection of tools for use with your modem.

PC Task 2
(CAT 1281 – 1 DISK). A working demo of this very good PC emulator program.

Planetarium
(CAT 1887 – 1 DISK). A simple program to display the position of the planets.

Pools Tools 2
(CAT 442 – 1 DISK). A great rich quick program? Could be couldn't it?

PP Mini Crunch
(CAT 838 – 1 DISK – NOT 500). A user friendly interface for the excellent Powerpacker. Very nice.

Professional Utilities
(CAT 634 – 1 DISK). A very good useful and varied set of worthwhile programs.

S-I-R-D-S
(CAT 2214 – 1 DISK). Create your very own stereogram pictures and baffle your friends.

Start of the Art
(CAT 2317 – 2 DISKS). These disks are packed chockers with various graphics programs.

Starview
(CAT 1610 – 1 DISK). A night sky viewer which even marks out the constellations.

Text Engine 4
(CAT 1464 – 1 DISK). The best word processor there is. Very well suited to the Amiga.

The Money Program
(CAT 1811 – 1 DISK). An excellent home money monitor program. Very useful.

Utility Disk Maker
(CAT 2371 – 1 DISK). Proves very helpful for creating your own disks, serious or not.

X Beat Pro
(CAT 415 – 1 DISK). A very friendly music sequencer program. Very good for learners.

ASSASSINS

Assassins 3
(CAT 104 – 1 DISK). Megaball – great breakout game. Drp-polished Painter game.

Assassins 123
(CAT 173 – 1 DISK). Includes the excellent Artillerus 2 which is brilliantly addictive, and for up to eight players.

Assassins 114
(CAT 185 – 1 DISK). International Cricket is on here, and so is Insectoids 2. Brill.

Assassins 95
(CAT 286 – 1 DISK). Includes two football manager games which are quite different from each other. Very playable.

Assassins 133
(CAT 1139 – 1 DISK). There are two great Columns type games for you on this one.

Assassins 138
(CAT 1348 – 1 DISK). Includes the unmissable game Scorched Tanks. Totally addictive, and great multi-player fun.

Assassins 128
(CAT 1632 – 1 DISK). Three brilliant versions of some arcade classics. Includes: Space Invasion, Deluxe Pacman and Solar System Wars.

Assassins 139
(CAT 2282 – 1 DISK). Includes a good fruit machine game, and weird breakout.

Assassins 135
(CAT 2442 – 1 DISK). Has a brilliant Backgammon game.

MUSIC/DEMO

Fairlight 242
(CAT 2781 – 1 DISK). Contains a very long video sequence set to the usual techno type music.

9 Fingers
(CAT 383 – 2 DISKS). An audio visual feast brought to you from Spaceballs. It's pop-video tastic and no mistake.

Arte
(CAT 562 – 1 DISK). A graphical extravaganza of a demo with funky-tronic music.

Attraction
(CAT 1243 – 1 DISK). A great music disk with some lovely thoughtful music.

Banging Raves
(CAT 213 – 1 DISK). Perhaps not rave exactly, but a good megamix of some classic tunes. A good mix of styles.

Banging Raves 2
(CAT 514 – 1 DISK). Another good megamix.

Basso Continuo
(CAT 1059 – 1 DISK). Ten excellent funky tunes are on here for your listening pleasure.

Doop Re-mix
(CAT 337 – 1 DISK). A good re-mix of that chart topping tune.

Gastric Ulcer
(CAT 2724 – 1 DISK). A good collection of some very hard rave tunes. Not for the faint hearted listener.

MUSIC/DEMO

Gospel Karaoke
(CAT 10 – 1 DISK). It sounds unbelievable, but it is true. Karaoke Amiga!

Kaos Theory
(CAT 1114 – 1 DISK). It's rave-omatic Amiga time with some seriously hard tunes.

Multi Megamix 2
(CAT 2498 – 1 DISK). An almost commercial quality re-mix of some very famous tunes.

Piece of Mind
(CAT 980 – 1 DISK). A great 3D extravaganza demo with some very classy music.

Scoopex 2 Unlimited
(CAT 2241 – 2 DISKS). Good old Scoopex supplies 3 very well produced 2 Unlimited mixes.

Sequencial
(CAT 547 – 1 DISK). A roller coaster of a demo.

For Your Mind
(CAT 2462 – 1 DISK). Fast video, fast music, a really moving experience for sure.

State of the Art
(CAT 19 – 1 DISK). An all time classic demo. Brilliant visuals and a cracking dance tune.

Star Trek Rave
(CAT 2390 – 1 DISK). Is nothing sacred? Apparently not. A silly story with pictures which provides a good laugh.

Techno Tracks 2
(CAT 1664 – 1 DISK). Awesome music and some great visuals make this a must!!

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(CAT 1227 – 1 DISK). If disk space is getting tight then this disk is definitely for you.

D-Copy 3.1
(CAT 2582 – 1 DISK). The best disk copier you can get.

Dynamic Skies
(CAT 1512 – 1 DISK). An amazing night sky viewer which is feature packed.

Easycalc
(CAT 1042 – 1 DISK). Simply the best spreadsheet.

Edward Pro 4
(CAT 2071 – 1 DISK). A brilliant text editor which has a very good feel about it.

Forecaster
(CAT 607 – 1 DISK). If you're a betting man/woman, this disk could be up your street.

Grinder
(CAT 1249 – 1 DISK). A versatile screen converter.

Hyperdrive
(CAT 1116 – 1 DISK – NOT 500). Creates a protected RAM disk.

Mandelmania
(CAT 820 – 1 DISK – NOT 500). A very fast fractal generator with fast zoom in and out.

Mandelplot
(CAT 90 – 1 DISK). An excellent shareware fractal generator. Tons of fractal types.

Magnum
(CAT 2666 – 1 DISK). A good disk magazine creator.

Opti Comms 2
(CAT 2375 – 1 DISK). An excellent collection of tools for use with your modem.

PC Task 2
(CAT 1281 – 1 DISK). A working demo of this very good PC emulator program.

Planetarium
(CAT 1887 – 1 DISK). A simple program to display the position of the planets.

Pools Tools 2
(CAT 442 – 1 DISK). A great rich quick program? Could be couldn't it?

PP Mini Crunch
(CAT 838 – 1 DISK – NOT 500). A user friendly interface for the excellent Powerpacker. Very nice.

Professional Utilities
(CAT 634 – 1 DISK). A very good useful and varied set of worthwhile programs.

S-I-R-D-S
(CAT 2214 – 1 DISK). Create your very own stereogram pictures and baffle your friends.

Start of the Art
(CAT 2317 – 2 DISKS). These disks are packed chockers with various graphics programs.

Starview
(CAT 1610 – 1 DISK). A night sky viewer which even marks out the constellations.

Text Engine 4
(CAT 1464 – 1 DISK). The best word processor there is. Very well suited to the Amiga.

The Money Program
(CAT 1811 – 1 DISK). An excellent home money monitor program. Very useful.

Utility Disk Maker
(CAT 2371 – 1 DISK). Proves very helpful for creating your own disks, serious or not.

X Beat Pro
(CAT 415 – 1 DISK). A very friendly music sequencer program. Very good for learners.

ANIMATION

Animation Studio
(CAT 2406 – 1 DISK). A fantastic program to get you started in animation. Features the onion skin layering technique.

Boat
(CAT 933 – 1 DISK). A very nice animation of a typical English garden scene, with a boat.

Bond's Last Stand
(CAT 835 – 1 DISK). Bond cops it at last, and not before time too.

Beach
(CAT 1566 – 1 DISK). A great single screen picture postcard type animation.

Human Cannonball
(CAT 1599 – 1 DISK). An amusing story of how not to be a human cannonball.

Linus
(CAT 1018 – 1 DISK). A very original anim with a very good cartoon atmosphere.

Raging Hormone
(CAT 2780 – 1 DISK). Poor old hormone tries to pull a bird. He should know better.

Raging Hormone 2
(CAT 2473 – 1 DISK). That thick hormone just doesn't know when to stop. Very funny.

Raging Hormone 3
(CAT 2130 – 1 DISK). Hormone passes on what he has learnt to his son. What a shame.

Savings
(CAT 112 – 1 DISK). The post office savings advert quite a novel end. Funny.

MISCELLANY

Communicate
(CAT 279 – 1 DISK). Learn how to communicate with sign language and many more.

Oclamed Tutor
(CAT 2456 – 1 DISK). An excellent guide to getting the most from Oclamed or MED.

Spectrum Emulator
(CAT 1446 – 1 DISK). Turn your Amiga into a 48k ZX Spectrum. A fast-ish Amiga is recommended though.

Specy Classics
(CAT 459 – 1 DISK). A collection of classic old Spectrum games for use with the above emulator program.

Specy Classics 2
(CAT 1499 – 1 DISK). More great games for emulator.

Specy Classics 3
(CAT 2593 – 1 DISK). And yet more corks.

The Invisible World
(CAT 1786 – 1 DISK). A visual insight into the tiny world of microscopic bugs.

Titanic Cheats
(CAT 1031 – 1 DISK). Absolutely chock a block full of hints, tips and cheats.

Ultimate Cheat Disk
(CAT 2583 – 1 DISK). Another disk packed to the gills with game tips and cheats.

VIC 20 Emulator
(CAT 1087 – 1 DISK). Turn your Amiga into a VIC 20. Comes with tons of games. Needs a fast Amiga to fully appreciate.

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(CAT 2215 – 2 DISKS). An audio visual treat of a demo with stunning graphics and an amazing CD quality soundtrack.

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(CAT 2033 – 1 DISK). A very fast paced demo with a really brilliant music track.

Full Moon
(CAT 1740 – 1 DISK). A brilliant demo with a spooky intro and a good pacey tune.

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(CAT 782 – 3 DISKS). A patience card game with some very beautiful picture cards.

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(CAT 2986 – 2 DISKS). A very long full motion video demo which lasts ages.

Megaball AGA
(CAT 842 – 1 DISK). The most popular breakout type game gets even nicer. A must.

Real
(CAT 2379 – 1 DISK). Possibly the best AGA demo to date. Totally awesome.

Relokick 1.4
(CAT 2918 – 1 DISK). Brings downward compatibility to your new 1200 to help get some of those old programs working.

Sleepless Night 3
(CAT 583 – 1 DISK). An essential collection of serious programs guaranteed to work on the Amiga 1200.

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Easybase is a unique PD database program that is exclusively available from us. It is very user friendly and easy to use. It features total on-line access to the mini reviews of all the titles. It also features a unique ordering system which does all of the hard work for you. So forget those boring lists and get something which is actually useful in finding the disks you want.

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ASI 209

Disk ASN209
Online PD

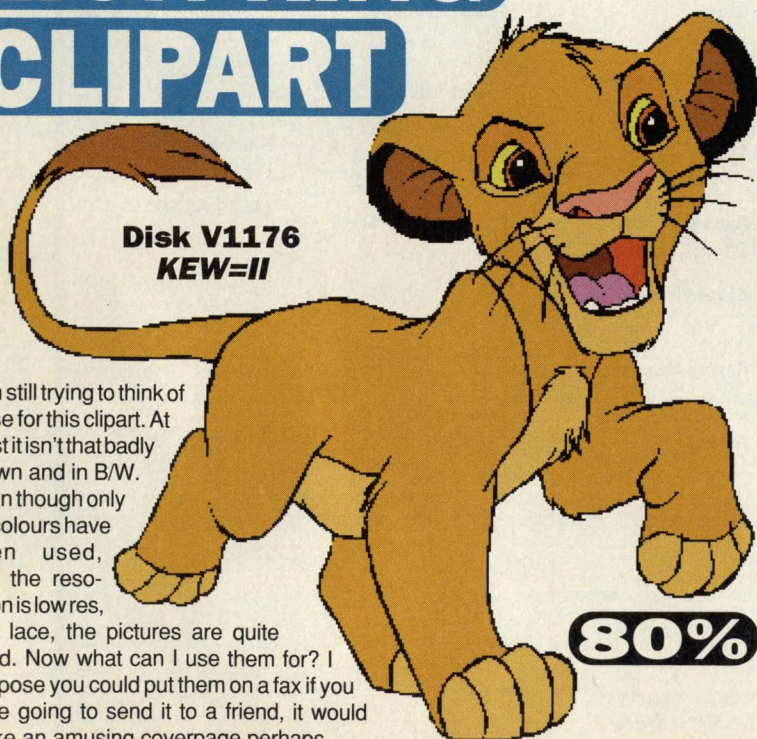
87%

This is disk 209 in the Assassins game collection. This particular disk contains a number of two player games. The first in Trick or Treat which I have reviewed before. The second is called Space Taxi and is an a conversion of an old C64 game. You control a taxi and have to pick people up from different platforms located in different places on the screen.

Sounds easy enough? It isn't as the taxi is quite difficult to control at first. There is also a time limit, so you end up racing around and spending a lot of the time crashing into the ground. It is an extremely fun game to play and contains some good samples.

LION KING CLIPART

Disk V1176
KEW=II

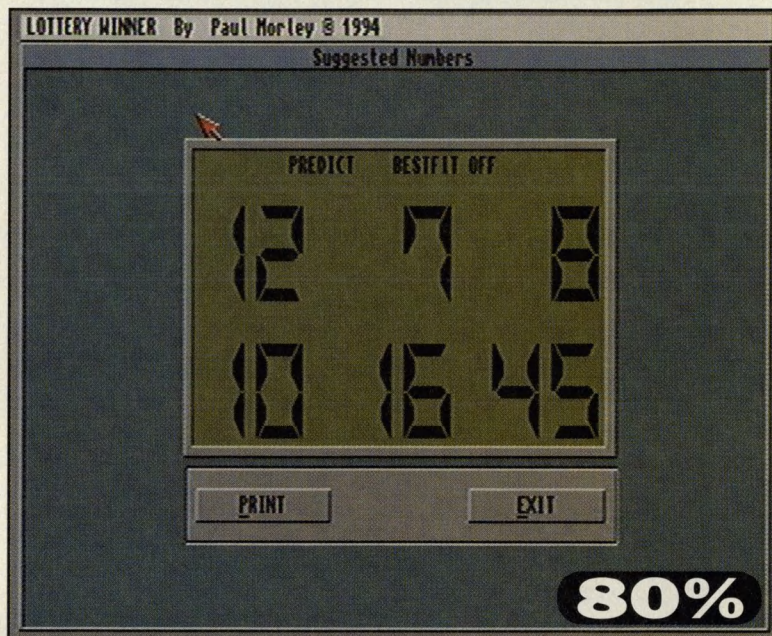


I am still trying to think of a use for this clipart. At least it isn't that badly drawn and in B/W. Even though only 16 colours have been used, and the resolution is low res, non lace, the pictures are quite good. Now what can I use them for? I suppose you could put them on a fax if you were going to send it to a friend, it would make an amusing coverpage perhaps.

80%

LOTTERY WINNER AGA

Disk 0X101 Online PD



80%

It had to happen, a computer program which picks lottery numbers for you. The author of this program has made previously made prediction programs and he claims people have actually won substantial amounts of money form using his previous pools program. As there is very little skill in winning the lottery this program is as good as just picking the numbers out of a hat.

There are several different predict modes but as the lottery is a simple number on a ball blown out of a machine, I can't see how this will improve your chances. Another strange feature is that this program is AGA only. It contains no fancy graphics but does not work on any other chip set. If you do win the Lottery using this program, the author would like a new set of golf clubs!

800 Solutions

Disk 0U63 Online PD

There are a lot of solution disks around at the moment. Many of them contain the same solutions. This disk however is slightly different. It contains a 400K text file which has the bulk of the game

cheats and tips in it. There are also a couple of small text files with some cheats and solutions for a couple of recent games. These include Universe, Detroit, Kidchaos, and UFO.

75%

Scribble Utils 16

Disk U412 Scribble PD

83%

When you buy a utilities disk there is almost always one program you already have. But this is outweighed by those which make it worth while. This disk is like that. I have already seen EdWord, Dialling codes, and Tooltype, but the rest are new to me.

Are you fed up with waiting for your system to read the font list when you are trying to select one in a program such as DPaint or Pro Page? You are? Then CacheFont is the answer.

It reads your font list and makes

a list in a file. When you go to read the list again, the patch intervenes and reads the file instead and the list appears instantly, clever eh?

Another useful utility (if the programs use it) is a set of new maths libraries. These libraries are replacements for the original ones written by Commodore. They control the FPU if you have one and only work with certain programs where a lot of maths have to be carried out, just the thing Gary Fenton could use to speed up his LightWave renderings!

SCANTASTIC!



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Company
Address

Postcode Tel
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Maylands Avenue, Hemel Hempstead, Herts. HP2 8BR



*Transparency adaptor and document feeder — professional options excluded.

For Epson Scanner Support call 0442 227478. For Epson Scanner Training call 0800 200546

EPSON®

Defender

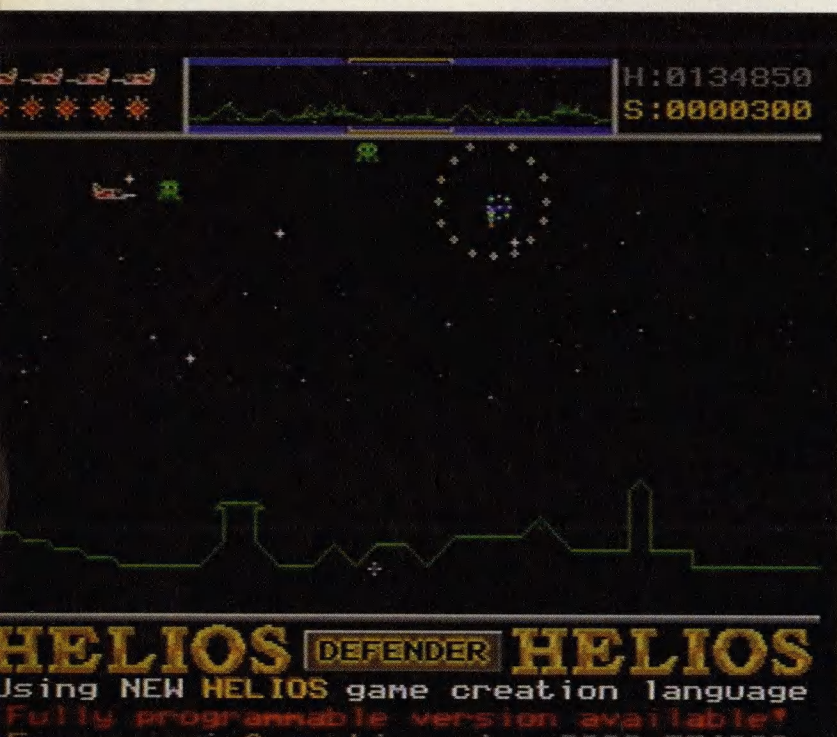
First Released through AUI SuperDisk 51

This is the first in a planned series of classic arcade games using the new games programming language HELIOS. The most noticeable thing, when playing it the first time, is how fast it is, it simply zooms.

Defender was one of my favourite arcade games back in the days when it actually was an arcade machine. This version is faithful to the

original with only a couple of differences. The graphics strike you as a bit small and they could have been a lot better. As the main graphic of the ship is small I found it a bit difficult to shoot the enemies. Apart from that, this is a highly playable conversion.

85%



Contacts for PD reviewed in this issue.

Scribble PD
2 Hillside Cottages
Burstall
Suffolk IP8 3DY
Tel: 0473 652588

17 Bit Software,
2/8 Market Street
Wakefield
West Yorkshire WF1 1DH
Tel: 0924 366982

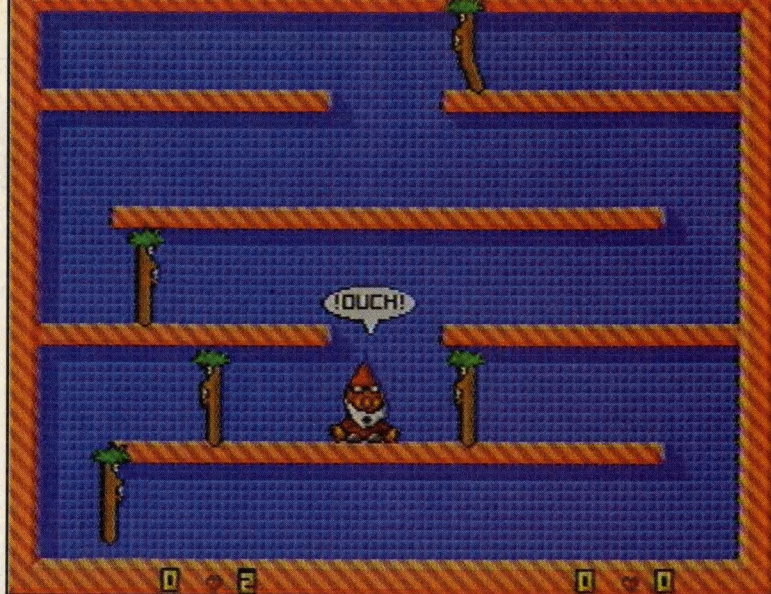
Roberta Smith DTP
190 Falloden Way
Hampstead Garden Suburb
London NW11 6JE
Tel: 081455 1626

Exclusive PD
7 Beresford Close
Waterlooville
Hants PO7 5UN
Tel: 0705 642409

F1 Licenceware
31 Wellington Rd
Exeter
Devon EX2 9DU
Tel: 0392 493588

KEW=II
PO Box 672
South Croydon
Surrey CR2 9YS

Online PD
1 The Cloisters
Halsall Lane
Formby
Liverpool
L37 3PX
Tel: 01704 834335
BBS: 01704 834583



HAM & TOSIS BROS

**Disk SGA172
Roberta Smith**

What a strange name for a game this is. When you get down to it, this is just a very basic platform game with some colourful graphics. All you have to do is shoot at the baddies which then float up into the air. You have to collect them to kill them. If you don't they will change back into baddies and you will

have to repeat the process until they are all dead. It is as simple as that.

It runs very smoothly on the A3000 but the intro screens disappear too quickly. On the A500 they are the right speed but the game is rather slow.

60%

SCRIBBLE UTILS 17

**Disk U413
Scribble PD**

There is another caching program on this disk called FastCache. This caches the hard drive which keeps the most used data in RAM so every time the computer wants it, it doesn't have to access the hard drive. It works well, and although the Amiga doesn't need disk cache as much as the PC, you might want to give it a go as I found it did speed up my system slightly.

Do you find the system requesters that appear, usually to bring you bad news, annoying? Arq can make these slightly less of a hassle by doing several things to them. Firstly their appearance is slightly altered, they are moved into the centre of the screen and there is the addition of a pretty animation beside it.

The main difference though is in the cancellation. The normal way of cancelling a requester is to either use the mouse, or use Amiga C or is it B? I can never quite remember. Anyway, this is now changed to Return to Retry and Escape to Cancel, much more logical!

90%

If you have created a masterpiece and you would like it reviewed here or if you own a Public Domain company and want to contribute new and interesting PD, please don't hesitate to send it in.

The address is:

**The PD Stakeout
AMIGA USER INTERNATIONAL
203 Eversholt Street, London NW1 1BW**

The Amiga Answer Machine

AUI ANSWERS

OTHER

Dear AUI,
I was wondering whether you could suggest a piece of sound sampling software (commercial if necessary) which meets the following spec.: Stereo and mono sampling, good editing functions Workbench 2+ GUI.

I have a home-made ('generic') sampler and haven't found anything for it in the public domain that will use its stereo capabilities.

My system: A1200, 80MB IDE HDD, 4MB 32-bit expansion fast mem, Commodore 1942 Monitor, other peripherals of no significance.

Do you know of any good PD (or shareware etc.) spreadsheet or database programs also with Workbench 2 styling? I have several which are quite good, but look awful. I am also looking for a book that will tell me everything I need to know to program in AREXX. If there is such a thing, could you tell me exactly where and how to get - it?

After all the excitement about the Commodore CD1200, which isn't even available yet and which I was not very thrilled by as I would have to chuck out my expansion memory to use it, it seems strange to me that a CD ROM drive for the 1200 should have appeared in the Silica ads without anyone noticing! I am seriously interested in getting one, as it plugs into the PCMCIA slot, but would like to see what AUI thinks of it first.

If you're not planning to do a feature on it next issue, could you at least tell me if it works?

I have a display problem which is very difficult to describe:

About 5 minutes after booting up from cold (literally, i.e. having not used my machine for a while) I start to get flickering lines about 1 x 70 pixels appearing randomly on my screen - They get worse, and

Andy Elkelson confronts, and solves, your problems.

Answer Types

APPS	Programs etc]
VIDEO	Video related problems
COMMS	Communications
PROG	Programming
OS	Operating System
PRINT	Printer Problems
COVERDISK	Cover Disk problems
OTHER	For Anything Else

the whole screen flashes from time to time, then after about 15 mins, they gradually disappear and everything is fine. The problem only occurs on high-scan-rate screens (i.e. - not the 15ish kHz ones like PAL), and never on the Workbench Screen: i.e. it can affect Wordworth but not Workbench even when they're both on Productivity screens.

It's not the monitor, as it happens on others, and I've tried disconnecting everything including removing my expansion memory. I'm not really expecting you to diagnose the problem from the other end of a post box, but I have had it suggested by a computer technician who's seen it that I have a faulty memory chip, which seems a reasonable suggestion. If you agree that this is likely to be the problem, I could replace a chip myself, but otherwise, I was wondering if you could suggest somewhere to get my machine fixed, and how much it might cost?

Don't you just hate people calling Wordworth "Wordsworth"? I've even seen it done in AUI - please be more careful in future. I know people who have used the program for years and still can't get the name right - I beta test for Digita (no jokes about Wordworth 3, please!), and feel people shouldn't

be allowed to use the program who can't pronounce the name.

Finally, I'd like to point out that your brief description of ABCDirectory in the August issue was most unfair in using the phrase "for the types [of files] that ABCDir won't recognise"

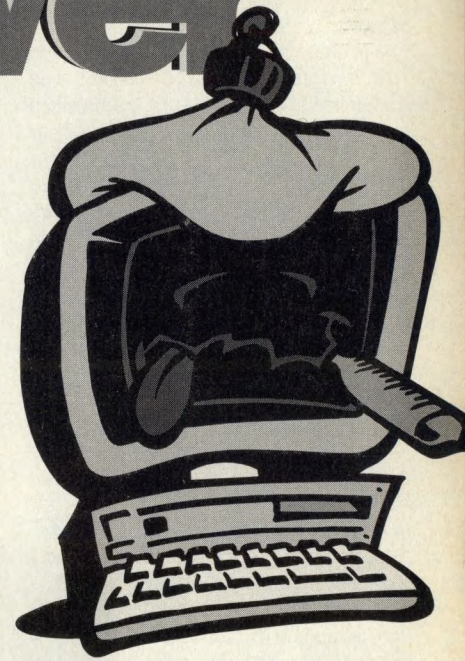
ABCDiR can in fact be taught to recognise any type of file, and you can tell it exactly what to do with them, all with loads of useful options. Although you probably wouldn't realise it from a quick glance through the AmigaGuide doc, it's an utterly brilliant program and I am about to send off my Shareware fee, with an offer to rewrite the awful manual. Speaking of which, is it safe to post foreign cash abroad? Is an international money order better? You needn't print the whole of this letter! Love the mag, etc.

**James Wheeler
Devon**

Dear James,
Well, programs such as OctaMed have been around for ages, where did you get the information to build your sampler, did that suggest anything? I've also trawled through the various PD lists and such like and I've not come across anything specific. You might like to have a look at Qudracomp of Fish 999. I found that to be a very easy program to use, and it has a very wide range of features. Providing that you can load your sample data into it, it will do the job for you. It also has a sampler driver built in, but I can't find any info in the program about stereo.

There is a contact point in the documentation so it might be worth writing to the authors (if you like the program that is). Most programs of this type seem to need a very specific type of GUI so don't expect too much along that line.

Spreadsheets and Databases, well my preferred database is Superbase. Likewise Supercalc is the spreadsheet I sometimes use. (I really don't have much use for a spread-



sheet) As for the look, well I find Superbase fine, but look is so subjective. I'm more interested in the practical aspects, does the program do what I want, etc. Or how about DB2.3 on last month's SuperDisk. No GUI, but it looks good.

The Arexx book, Using Arexx on the Amiga published by Abacus ISBN 1-55755-114-6 is very good. You can order this from any bookshop.

AUI will review things as we get them, you should have seen the review of the Zappo drive a couple of issues ago.

As for your display problem, well, I would think that it is more likely to be a temperature related problem than anything else. Something not making a very good contact, perhaps a dry joint on a surface mount device or an internal fault in one of the custom chips. A few squirts with a can of freezer spray might localise the fault a bit.

However, SMDs are not easy to work with. If your machine is still under warranty it would be worth trying for a replacement. I'm not too sure about a bad memory chip, if a chip were bad I would expect to see program crashes as well, also the system self checks might pick it up, especially as you say that you removed your expansion memory. This would mean that any bad memory chips would also be used for OS and program memory.

As for WORDSWORTH.. No, I don't hate people for calling Wordworth that. In fact, I think that Digita dropped an almighty clanger by not calling their program Wordsworth. Wordworth rolls off the tongue much better, as well as having a direct connection with a famous historical

figure. But so far as I know we haven't made that mistake in **AUI** but if we have you should tell Bud Vennos about it - it's just the kind of thing to drive him spare.

I have made no comments about ABCdirectory, apart from a few replies about missing files. Please remember to separate out points for other sections of the magazine onto separate sheets. Anyway I have found the comment you referred to, that's another point, be a bit more specific in identifying passages in **AUI**, (a page number is enough). The phrase in question was in a box-out within the Dir Work 2 review. The context is a little ambiguous I admit, but generally I agree with it.

You can train ABC to identify the various files, but in itself ABC can do nothing with them. You need to tell ABC to use another utility. I think that this is the point that was being made. (I've had a look back at the piece I wrote and I see what you mean. I suppose you could construe it the way you saw it, but Andy is right, it is meant to point out that additional programs are required to do certain things. Since then, there have been a few other file utilities on the disk and there are plans to include another later. Different people require different levels of complexity and we'd like to please everyone - but as you show, it just ain't possible.)

Good luck with the documentation. ABC is made almost useless due to the state of its documentation. It is reasonable for someone familiar with a directory utility to work out what has to be done, but I sympathise with a

new Amiga user trying to make full use of it. Go ahead whatever happens you will be doing the Amiga community a service.

There are several methods of paying for shareware. Money orders are one way, but are expensive. I have shoved a few dollars in an envelope before, but it is a risk. I normally limit this method to not more than 20 dollars. If you want to send money within Europe, then you can get a Eurocheque account at most banks. You just fill in the cheque for the local currency required. There is a service charge for each cheque, but it is much less than a money order.

OTHER

Dear **AUI**,
I write once again to yourselves as you are the only magazine currently that has been bothered to place my previous letters in your magazine, and following the advice you have given to others and myself has furthered my knowledge in my Amiga which can't be a bad thing, but one (not as in the Royal one) can always learn more.

Currently running a 4000/30 with 2Mb of RAM and 4Mb of fast RAM I continually get (especially with Brilliance) the message insufficient memory. I get this problem with nearly all image programs even though I am not doing anything stunningly large in other words huge animations.

Sometimes it occurs even with a single graphic picture which I am trying to manipulate, and when I pull down the screen I can see on the top bar that the graphics memory is low but I still have plenty of other (Fast RAM) memory. So how do I get the Amiga to understand the use of Fast RAM. I have tried installing in the User start-up C:\fastmemfirst, and have also added FastMemFirst into the Icon info from Workbench but still the problem is persisting even though I know I am not out of memory.

I was told that the stack size in the Icon info for the programs giving me grief was set to low so I have also tried increasing this with no difference made. If I shouldn't have done this I can always replace the Icon Info from disk to its original settings.

As I said before its not just Brilliance but it does seem to be mainly anything graphics based which I know does use chip RAM but I thought once that was low it should use Fast RAM.

Hoping you can help me with this problem.

Tony Rouse
Kent

Dear Tony,
I think that I had better explain how the Amiga graphics chipset functions.

As you know there are two main types of memory, Chip and Fast RAM. There are several microprocessors in the Amiga, the 680x0 is the main processor that you use to program the Amiga, however, the graphics chips form a tiny, but very fast processor of their own.

All processors need memory to operate. The 680x0 processor can access all memory. The graphics chipset can access a limited amount of RAM. This graphics RAM is called CHIP RAM, because the graphics CHIPset can access it. What is more, the graphics chipset has priority access over the CHIP RAM, the graphics chipset, can even stop the main processor from gaining access to the chip RAM.

Fast RAM is RAM to which the main processor always has access, regardless of the actions of the graphics chipset. That's the basics out of the way, now what does all this mean?

Well, the graphics chipset draws everything on the screen. Every screen that you have, eats away at your chip memory. The more colours that you have, this uses more chip memory. Take a picture for example. About 2 inches square, on assuming 150dpi, that's 300 by 300 pixels = 90,000 pixels, which is about 11.25K, supposing that this was a colour image, and you used a 256 colour mode, you need 8 bits to represent 256 colours, so the picture now eats up $11.25k \times 8 = 90K$ for a

640*400*256 colour screen you need 256K of memory.

This is the bare minimum needed, in practice much more memory is required to control the display, and every screen that you have open uses more and more of your chip memory. Many graphics programs work on the raw image data in fast RAM, and only transfer the results into chip RAM for display purposes.

It's also worth noting that external systems such as Vidi, and scanners generate massive files, far bigger than the screen display. Should you load one of these into a graphics package, you will run out of memory very quickly indeed.

Your small picture generated about 4Megs of raw image data when I scanned it into the Amiga, after AdPro got to work on it, the output file was about 40K.

Not much of an answer I'm afraid, about the only tip I can think of is to use only the default four colour Workbench screen, as this gives maximum memory for other applications.

OTHER

Dear **AUI**,
Would you provide me with the details of fitting a SCSI hard drive (Ex Mac) to the back of the A570 CD drive. I have not dared open up the back, but Sysinfo tells me I have an A590/A2091 fitted. I can get the information on the power supply etc. what I need is the Amiga side of the connections. By the way Sysinfo crashes with the CD drive switched on, but runs with the drive switched off.

If you ever want an entertaining morning, try asking the firms who advertise in your magazine about expansion devices for the A570. They could not care less.

Thank you for a great magazine, by far the most consistently excellent Amiga magazine about.

John Macdonald
East Sussex

Dear John,
The 570 does have the ability to connect to a SCSI drive, but it needs an interface to do so. These interfaces were never sold commercially as far as I know. SYSinfo is not too clever at times, and probably does not know about the 570 CD drive.

OTHER

Dear **AUI**,
I have a B2000 which contains a Nexus board holding four megs of



extra RAM, and an Impulse Plus Quantum type SCSI hard disk. The machine runs under WB 1.34. Recently it has started causing problems. Normally all is well after the initial switch on. However, after running for some time it tends to have random crashes, normally with the message displayed "Software Failure" and a number.

I can, however, leave a program like VistaPro generating overnight and save the resulting output the following morning without problems. Word processing programs also seem to run OK. When I load a DPaint IV picture into memory, and play around with it for half an hour, saving the file at regular intervals, all is well, but if I go away and leave the machine untouched for half an hour or so, then return and attempt to save the file, the computer invariably crashes. The same problem occurs with other graphics programs such as Personal Paint.

Games such as The Settlers tend to lock up after playing for a time, although Dynablasters runs without problems. Sometimes the internal clock will even reset itself. The current date has gone to August 1938! Also after a crash the machine occasionally has difficulty rebooting itself simply leaving me with a dark grey screen. Turning the computer off for an hour and then retrying usually results in things returning to normal.

I had the machine serviced and one or two devices such as accelerator boards which could have been the cause of potential conflicts were removed. However, no obvious faults could be traced.

Because of checksum errors on the hard disk, possibly caused by the random crashes, I also reformatted this, checked for bad blocks and reinstalled everything to ensure stability.

What is the most likely cause of the problem? A faulty power supply, an unstable RAM chip, or a fault with the Amiga graphics chip itself?

I am baffled.

Brian Stringer
Epsom

Dear Brian,
This could be any one of several different problems. I doubt that it is a memory problem, that would manifest itself all over the place.

I have a couple of thoughts on this. The first is that one or more of the chipset is not making a very good contact in its socket. Give them a good push and ensure that they are firmly seated. After a time due to vibration and temperature changes, chips can move in their sockets. Pay

particular attention to the big square chip in the middle of the motherboard. Do the problems occur mainly after disk access? If so that could point the finger at the hard drive or the Nexus interface.

A virus might be the cause, I don't like the way your clock is being reset. That can be a program going haywire or a virus.

OTHER

Dear AUI,
Either I'm BOLD or crazy, to confess the following, but may I suggest that IF 25% of Amiga owners have been as confused as I have been, for the last six months or so, could it reflect on the welfare of the COMPANY?

Although my associate (who has a 600) and me (with an A 1200), buy a selection of Amiga magazines, for some reason we both are having difficulty in GETTING OFF THE GROUND. The main reason for this being when we were at school, a computer was something used in an office, and all we ever saw were VERY BASIC CALCULATORS. So I confess on both of our behalf we have NO BASIC KNOWLEDGE WHATSOEVER.

We are trying to put the SPECTRUM behind us. But, there is a lot to be said about THE DEVIL YOU KNOW.

So we come to the point of issue. For some six months I have been toying with this BASIC A1200. I already had my PANASONIC KX-P1123 Printer, which incidentally I have been very pleased with: (MONO 24p DM). I also bought a second CFD drive very useful. I use a 22" colour T.V. for a monitor (well, it works), not in stereo tho.

So, here I sit, mouse in hand, a copy of the WORKBENCH3.0 and manual at hand; and complete set of WORKBENCH C.F.Ds.; even a copy of BRUCE SMITH'S INSIDER GUIDE wondering what it's all about.

Don't get me wrong; I'm into WINDOWS and ICONS, and basic functions regarding same, but I'm sitting here still puzzled about D.O.S. A.G.A. and so on. I really need someone to give me some ideas how to broaden the field.

I know that most of your letters are from people who have SPECIFIC problems. Of course, I know that there are HARD DRIVES, P.M.C.I.As, MEMORY EXPANSIONS, MODEMS AND EVEN FAX facilities available, let alone items which can copy colour pictures in the blink of an eye. If proof were

needed that I am fairly conversant with the magazines; unfortunately the prices of the aforesaid are beyond MY wildest dreams. Never mind.

I must stress that I am not a youngster, but being of receipt of disablement income, (a.) the need for a permanent hobby, which is of a scalable price-range, (b.) with which I am able to get along with.

Most importantly there is no one locally with any knowledge of AMIGAs, and those (out there) who are really gened-up, do not appear to have the time to share with such a NOVICE. I can understand this, who wants to go backwards? Hopefully SOMEONE JUST MAY.

If you do get around to reading this, I would be delighted if anyone could, further my knowledge of the basic A1200.

It would make me feel rather INSIGNIFICANT if this letter were published in the mag. But if you feel that it makes the point (for perhaps even a minority of AMIGA users), then please do.

A.R.Edwards
Essex

Dear A.R.Edwards,
There are lots of things that you can do with a computer. The first thing to do is decide what, and that's the hardest part!

To gain knowledge, read and read and read some more. You will find that AUI does run articles for the newcomer to the Amiga, and we will continue to do so. To whet your imagination here are a few topics that may be of interest.

Programming
Amos
C
Forth
Pascal
Modula
Oberon
Assembler
Graphics
Drawing (drafting)
Artistic
Image processing
Animation
Music
composing
sampling
Video
Titling
Production
Publishing
Desk top
Own magazine
Writing

That list took me about two minutes to come up with and there are hundreds of other topics that I could include. All we can say is keep reading. You'll learn as you go. And

also why not try joining ICPUG - they certainly, even the old hands, are ever willing to help out novices - that's what user groups are all about. You'll find they advertise in nearly every AUI. If you want to learn the tricks and tips of the Amiga, ICPUG's members know them.

OTHER

Dear AUI,
I have an A1200 fitted with an external KCS dual high density drive, a 200 Meg hard drive and a Microbotics M1230XA board fitted with an 8 Meg simm.

Previous to this I had a 4 Meg PCMCIA card fitted with a 4 Meg simm on the Microbotics board. This set up worked OK using the AUTOXA as described in the enclosed instructions, which was included in my startup sequence allowing me to put all the background tasks (virus checker, tool manager, and dual track display and background pictures on the Workbench display) into fast memory as opposed to chip RAM. This set up left me with approx. 1.6m chip and 7m fast.

When I upgraded to the 8 Meg simm I removed the 4 Meg card and replaced the 4 Meg simm with the new 8 Meg simm. This is when my troubles started. On switching on the computer it went through its startup routines and on resetting, due to the action of the AUTOXA, the computer would keep resetting itself with various software failure messages. These seem mainly to occur in the devs/monitors region.

On removing the Autoxa from my startup sequence this stopped the fault. However, this meant that the 8 Meg simm was not seen by the system. This left me with about 0.7m chip memory and no fast memory. The only way I can get the computer to see the 8 Meg simm is to place the addmem program into either the startup sequence or Workbench startup which is less than ideal as it leaves me with only 0.9m chip and 8m fast.

I have tried the simm into another m1230 board and these faults still remain. I have placed the simm into a m1200 memory board where upon it sees the 8 Meg at startup, this seems to rule out a faulty simm. I have tried the m1230+8 Meg simm in another a1200 and the fault still appears, ruling out my 1200 as being faulty.

I have heard rumours from a dealer in Amigas that the m1230 does not like an 8 Meg simm.

My original intention was to get

rid of both the 4 Meg simm and the 4 Meg card and have the same memory (8) on the board to free up the card slot to allow me to fit an external CD ROM drive.

I have even tried (thanks to a kind dealer) installing Workbench 3.1 on my hard drive but the fault still remains. Any help on this would be most welcome.

The software version of the Microbotics setxa is 1.1. The power supply has been checked with a high power type without any success.

John Walker
Gateshead

Dear John,
On the face of things it does seem that something odd is going on. I have never come across this before but it may be temperature related, with the simm being the offending part. I do not like the way your system keeps resetting so something is not at all well.

The only thing I can do now is to email MicroBotics and see if they have any ideas on what is going on.

OTHER

Dear AUI,
In answer to Bryan C Steele, last month, you can connect a CD570 drive to a hard drive via Amiga to Amiga, or Amiga to CDTV.

Amiga to Amiga, first you need another Amiga 500 or 500+. The CD570 will connect to the first Amiga and if you have a 590 HD that would connect to the other Amiga, via a Parnet cable. You can also daisy chain other hard drives to the A590, to increase your storage space.

To boot up your system you will need the program called Parnet which you should have installed on your hard drive (A590 start up sequence) to cut down the time factor.

Right, now you have all the above you can boot up the machines. Power up, then place the boot disk in the Amiga with the CD first, double click on boot host that should now be running and looking for the Amiga with the A590 connected. Now boot up the other machine (boot guest) after completion you can now access CD to harddrive and copy all your CDPD that you want

Paul Rimell
Midlands

Dear Paul,
This is not what Bryan was after, but it does act as a reminder that Parnet

is available and works very well.

I would point out that if you have the Weird Science Network CD then Parnet is already set up on that, so it saves a lot of disk making.

OTHER

Dear AUI,
I've just read your reply to the letter I sent you regarding the upgrade of my accelerator CPU/RAM and for information about the A570 printed in the October 1994 issue and it would appear that my reasons for never previously seeking help from Amiga Answers have been totally justified. You've told me nothing I didn't already know. I'm afraid I'll have to push you on this one because AUI is the only Amiga mag I buy and if you won't help me, who will?

I'll put my questions to you again and IF you do answer them please remember that 'should' and 'maybe' aren't much use to me when such large sums of money are involved. I'd rather settle for Yes, No or Sorry but our resources and contacts can't cope with that one.

Here we go again... Will SCSI devices work on the internal SCSI connector that can be found in the A570? I won't buy one until I'm sure.

From the information I have supplied it is safe to assume that I am already in possession of the fast Pal upgrade kit needed to increase the speed of the CPU from 25mhz to 40mhz on the Microbotics VXL-30 accelerator board. Forget about the spec-sheet, that just gives speed comparisons against the A3000, and the three pieces of paper I loosely refer to as the manuals give no information about the differences between the Pal chips.

Here is some info I neglected to tell you last time...the two chip carrier packets that contain the Pal chips each have a printed sticker on them that says "VXL*30 V-1 PAL UPGRADE KIT" the other is "VXL*30 V-2 PAL UPGRADE KIT", the chips in them are numbered as follows: 02-902-U26 03-402-U28 04-902-U25 05-902-U22 07-904-U21 08-903-U24 09-402-U20 10-902-U27 11-403-U23 12-902-U17 and to add to this 01 is not there but is present on the accelerator (01-901-U19) and 06 is not even on the accelerator.

I have swapped 02 04 05 07 08 10 12 with the chips of the same number already socketed on the accelerator and it seems to function as normal but will crash if I load a game like Elite2 or F1gp, this leaves

03 09 11 which have the different numbers.

The machine goes dead when one or all of these chips are used, but the manuals only state that I need to change 03 09 11 anyway so what the others are for I just don't know. I hope this extra info will help.

You were quite right to say that I need the correct RAM chip number before I try to buy the 8meg of RAM I need and guess what... the chip number is exactly what I was hoping you could tell me, I shouldn't have expected you to read between the lines and figure that out. If I have the number for these 1mbit-by-4 rams I can probably pull them out of a scrap PC or at least get them cheaper than £50 per Meg.

C'mon on guyz help me out here will ya please, I am serious about this stuff ya know. How about calling up some of those names your always dropping and see if they can help?

Dave Simmons

Dear Dave,
There has been a lot of speculation about the SCSI capabilities of the 570. The most up-to-date information that I have been able to gather is: the 570 does have a SCSI capability, but it would require an interface adaptor to make it all work. I know that a few development interfaces were floating about, but as far as I know, nothing commercial was ever produced.

Your extra information could point to a fairly major bug fix by changing from V1 to V2. It may have nothing to do with the fast processor upgrade.

Plug the chips into the correct sockets as instructed and things should work, contact Microbotics if you have problems, as with detailed hardware problems such as this, the manufacturers are the only people who will have the inside knowledge of what each chip does to be able to sort out any problems.

Not all software is compatible with all processors. I have no problems with Frontier on my system.

PALs are programmable logic arrays. They take the place of a few dozen gates and are very useful in small scale production runs. The Uxx number at the end of the chip number normally refers to chip number printed on the PCB, that might be useful as a cross check. It is quite possible that only some of the chips need changing, hence the reason why 01 is not changed.

Upgrading the processor is a function of a faster CPU AND a faster clock, not one or the other! It has to be both. You should not clock a CPU faster than its rating, it can overheat.

RAM chip numbers are not quite standard and the only way to find out

is to look up the chip numbers in the manufacturer's data books.

Your requirement for 16 1Mbit by 4 could be met by a Hitachi 51440 which is a 4Mbit chip, arranged as 1Mbit * 4 70ns, page mode 130ns R/W cycle. Siemens also produce a chip with the same number and with similar specs, cost is about £24 each, but RAM prices vary on a day to day basis so it is always worth checking.

I have mailed MicroBotics to try to sort out what chips you have actually got, as and when I get a reply I will print it in Amiga Answers.

Oh one last thing, write another letter with the same tone as this one and it will get filed in the byte bucket.

COVERDISK

Dear AUI,
I bought the AUI October issue, I have never bought AUI before.

I cannot load the disks, all I get is "the icons have no default tool" or something I have A500 with an extra 500k with a clock.

Your magazine says that I must access via Workbench and libraries may need updating, what does this mean?

Derek Warren
Warrington

Dear Derek,
Read the instruction panel on page 8 of AUI and follow the instructions.

The disks will be automatically uncrunched, remember to boot from the Coverdisk and have a few spare disks available.

Accessing via Workbench means just that, access the programs via the normal Workbench interface. Similarly, updating the libraries means just that. The Amiga OS is based on a large number of shared libraries. These are common pieces of software code that all applications can make use of. There are quite a few libraries, (such as the ARP.library) that are PD, and offer various facilities. Some programs need a version of such libraries that have specific functions in them. Therefore the program will check the version number of the library before running.

If you have an old version of a particular library then you may need to replace it with a more up to date version before the program will run. Libraries live in the LIBS: drawer.

Please remember when writing to Amiga Answers I require as much information as possible to be able to help. Comments such as 'or something' such as you made make me cringe. Fortunately in this case it does not matter, but another time it might.


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COVERDISK

Dear AUI,
I have recently purchased a copy of the July issue of AUI after having seen that the cover CD states CDTV compatibility.

After many hours of trying though, I still cannot get the demo of Labyrinth of Time to work. Is it just my disk at fault or they all like this?

I like the idea of making the CD CDTV compatible as no other Amiga magazines do this. Will you be including more PD + Shareware on your disk in the future? At the moment it seems that PC owners get the best cover CDs I hope that this is about to change. I ran your CD on a CDTV which is parnetted to an A1200. I hope that you can help with my problem concerning Labyrinth of Time

Darren Noyce
Suffolk

Dear Darren,
Sorry you have not provided me with any information to work with. I cannot read minds. The instructions state to press 1 after the buzzer to play Labyrinth. Do you do this, what happens?

The Amiga CD! Disk is compatible with the CD32, CDTV and the 570. This is in the same meaning as that the disk will boot. The programs on the disk may well be machine specific. Do not assume that the entire contents of the disk will work on any platform because it won't.

It takes a long time to compile a CD disk, we may put some software on it, we may not; it will depend on available space and time. We are including some of the Superdisks on the CD as we have had several requests to do this.

The market for PC machines is vast, so there is more incentive for software authors to make their programs available on CD. Things will gradually improve, especially as I think that CD will be the media in which most programs will be distributed if the future.

COVERDISK

Dear AUI,
I purchased the September issue of AUI with Superdisk 42 on the cover. It would not load on my Amiga 500+ but it worked on my friends Amiga 1200 which he down graded to a 500 plus with Workbench 2 which is the same as mine.

He was able to run all the programs especially Talking Reminder program which is what I am especially interested in getting to work on my machine.

All that works is the show STD and Epoch database programs. Please could you help with any information on getting this reminder program to work?

M.A.Collins
Wales

Dear M.A.Collins,
This is another one of those problems that can, in part be solved by reading the docs. There is also one other point that Good Old SnoopDos reports.

First from the documentation:
L:speak-handler
LIBS:translator.library
DEVs:narrator.device
SYS:Utilities/Say

Note that the above is the standard "speech" software distribution and placement for AmigaDOS 1.3 and 2.04. Commodore ceased distribution of these files beginning with AmigaDOS 2.1.

Also as reported by SnoopDos the program requires Version 39 or better of the Intuition.library. The Shell command "version intuition.library" will tell you which version you have.

COVERDISK

Dear AUI,
I am writing to ask for your help with a program that was on one of your cover disks, (Superdisk 42). The program in question is DiskSpare. I have an Amiga A1200 with two external disk drives. I read the docs for this program and can't understand about the mountlist part. I did actually get it running once but I got two icons for the drive DF1 and DS1.

It was impossible to install the disk. Also once formatted I couldn't install it to create a self booting disk. Diskmaster 2 wouldn't recognise it as a DOS disk. Please could you explain in layman's (simple) terms about the mountlist and how to append it. Also how to get the program up and running properly and if it is possible to install and how to do it to the disk and how to get diskmaster to recognise it as a Dos disk.

This would be an interesting and useful program if I could use it properly. If it can't do what I require can you tell me what I could take off the Workbench 3 disk to give space of about 50 or 60K so I can customise it by adding a few useful utilities to it that I'd like to keep on the same disk.

I would ask my friends but although they've had their Amigas longer than I have, I know more about Shell etc, but not that much. I did swap from the Atari ST to the Amiga and on the ST you could get a program that you ran and could format the disks just as easy as pie. Is there a program in PD that could do that if this one can't?

I have been buying your mag since October 93 and I think it is excellent, the right balance between serious and non serious side of computing on the Amiga. Although why don't you get the programs to make a teletext receiver for the computer and run a workshop from the start to the complete end. I liked the sound of this thing but don't know if I have the experience or expertise to carry it out without some form of guidance.

Steve King
Ipswich

Dear Steve,
I think that you might have misunderstood what DiskSpare does. I am not going to give a step by step, as the instructions are perfectly clear apart from one little item which I will tell you about.

The docs clearly state that DiskSpare is a fairly complicated program and should not be undertaken without a reasonable depth of knowledge of the Amiga OS. This is a problem for a lot of new Amiga owners, because over the years Commodore have taken a lot of the skill out of setting up the Amiga.

DiskSpare sets up a NEW format for the disk which gives you a bit more space. You CANNOT make a booting disk from this because at switch on the Amiga only understands standard Amiga format disks.

The mountlist was a text file that was kept in the devs drawer and you simply edited it with a text editor such as ED or Emacs. In later versions of the Workbench OS the mountlist was broken up into small text files and given an icon. Look in the Dosdrivers drawer and you will find them.

Copy one of the DosDrivers to RAM: give it a new name and then edit the file. You will find the mountlist is just the same as described. Once edited put it into your storage drawer or your dosdrivers drawer.

Once the Amiga is booted and the new disk format is understood you can then format the disk. The Shell is a fairly easy way to format disks. The Amiga has a standard format routine built in, put the disk in the drive, click once on it and then select format from the icon menu.

Yes, you will get two icons, one for df1: and one for ds1:. Only one will be read at a time. Either the disk is standard or DiskSpare format. The

last few SuperDisks have been using Diskspare, so have a look at the script files that are used as they will show you how it can be used for floppy drives. That's one of the reason the script files are made available to you.

There are several disk copy and format programs for the Amiga, but they will work with the normal disk format, try superdooper (SD) by Sebastiano Vigna.

The teletext system is easy, just type the data into the Amiga as it appears on the TV. Seriously that is a major project. You would first have to design a TV receiver, and then a teletext decoder, then a suitable I/O interface and the programming that would require. Then comes the driver software for the Amiga. It is well beyond the scope of AUI to embark on such a project.

COVERDISK

Dear AUI,
I am writing about a problem that I faced with Superdisk 42. This was a great disk, the first one I have received from this magazine with a lot of great programs. As I said this was the first issue of AUI I have purchased, mainly because you were giving away Model4D. This is where the problem lies.

I have an unexpanded A1200 and when I tried to load Model4D after I had unarchived it, it crashed. I loaded it again through Workbench 3.0 so that I had the necessary libraries on my Workbench disk hat are needed for the program to work, yet it still crashed after I double clicked on the big Model 4D icon.

This was distressing since I read that all the programs on the disk had worked on the A1200 when you tried them. I am desperate to try out this program so I phoned your offices and the man I spoke to told me that the program had worked on the office 1200, and that I should write in for an answer. Please tell me that it is just a minor problem which can be easily solved because as I have already mentioned I can't wait to use it.

Garry McLaughlin
Glasgow

Dear Garry,
There is something odd about this program. I have managed to get it to run only once in about ten attempts. It seems to be a rather random problem and I can't tie it down to anything special. I'll keep an eye out for any new release of this package that might have some bugfixes in it. Some people have solved it by upping the stack size in the icon information. You could try this.

COVERDISK



Dear AUI,

1. When I received my first copy of AUI (I've just subscribed) I noticed an error in my name. My name is NOT "Kinderkruis" but "VANDECRUYS"

2. I have a little problem with Superdisk 39. Iconian doesn't run. I tried everything including re-installing, but the only thing my Amiga does is "Attempting to load Iconian". I succeeded once in making it run, but I can't remember doing anything special. I own an Amiga 1200, 60 Meg HD, 4 Meg extra RAM, a second drive "Promigos", an Epson LQ 100 printer and a 1084S Commodore monitor.

3. Most of my .guide files cannot be viewed with Multiview. I get an "Unknown datatype for #?.guide" error although I have the AmigaGuide Datatype in DEVS: Datatypes. Can you tell me what is causing this very irritating error (PS. NEVER try to read a .guide file in More).

Kris Vandecruys
Belgium

Dear Kris,

Sorry about the error in your name, I must admit that I had a collection of about 30 different variants of my name until I gave up! I'll shout at someone for you.

Iconian needs nothing apart from WB 3 to run. Uncrunch it, and then just click on the icon.

Your datatype problem is rather strange. Check that you have the following files in the correct directories

Devs/DataTypes AmigaGuide
Devs/DataTypes AmigaGuide.info
Classes/DataTypes
amigaguide.datatype

Providing that you do have these files, then Multiview should be able to find the correct datatypes.

As for reading the .guide files in more, don't forget that someone has to type that lot in to create the file in the first place!

COVERDISK



Dear AUI,

I recently purchased the new Zappo CD-Rom for the A1200, this enabled me to sample your CD coverdisks for the first time and funnily enough out of the three you have released, the first one

gave the least problems in accessing. No 2 had problems processing ??? at the proper speed, and No 3 gave off a large header type ??? and opened a requester window on a Workbench screen and then refused to work.

However, my letter deals mainly with disk No 1 and in particular the Microcosm demo, on my Zappo drive with the emulation software, the intro works with slight corruption i.e. flicker ghost images up to the point where the first image of the tunnel starts, then the screen goes lime green and screams start to sound. Although I don't have the particular magazine for this CD any more I do remember a ??? based on this demo failing as the winning CD. So do I have:

- (a) the winning CD
- (b) A faulty CD or CD's regarding my comments on 2 & 3
- (c) or is Microcosm not compatible with the Zappo

A.E. Ingram
Corby

Dear A.E. Ingram,

I have had a couple of problems deciphering your handwriting, only a couple of words but it does bring up a general plea from me to all readers who write in to Amiga Answers.

It is vital that I have enough information to be able to help. I prefer good quality printed text Laser, inkjet and dot matrix NLQ is fine. I don't mind 'standard' dot matrix. However if you have to send in handwritten letters, make sure I can read them. PRINT your text carefully, you may think that your handwriting is easy to read but that is not always the case.

If when you run the CD you hear a voice over introducing Ashley then your disk is NOT a winner. (My real answer should be don't throw away back issues of AUI!)

I would say that as the Zappo was not about when Microcosm was programmed, that is the most likely problem.

It is worth noting at this point, that it is very unlikely that anyone will be able to help regarding compatibility problems with the Zappo and any CD title. Zappo have worked very hard to get a good level of compatibility into their system but they will not be able to trap every possibility. Make sure that you keep in contact with Zappo so that you keep yourself up to date with any Software driver updates. A Microcosm demo was put on No.2 disk as well, so you should be able to see on that one.

There was a fix to help CD3 run on the A1200 CD drives contained on the SuperDisk a few months ago, so I hope you spotted and bought that! AUI

Toolbox Tooltype Release 3.0

Author: Michael Barsoom

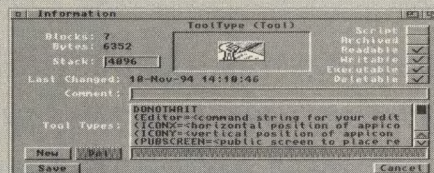
Requires Workbench 2.0 +
ReqTools library

Running programs on the Amiga is a very simple process, normally a double click on an icon is all that is required. Many programs offer several options, (Tooltype is one of them). So how do you tell a program which options to use?

The answer lies in the information contained within the 'tooltype' list that form part of the icon file. (A .info extension denotes an icon file)

Take a look at the information within tooltype. Click once on the icon and then select information from the Icon Workbench menu.

You get this:



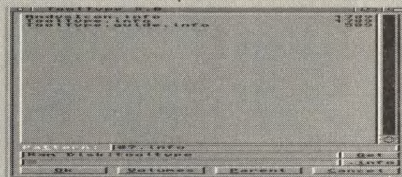
If you use the CLI some of the words in the tooltype list will be familiar to you. They are a way of passing specific options to a program when it is run from an icon. A commodity will often use the tooltype DONOTWAIT which will allow the Amiga to continue its boot process rather than wait for the commodity to finish setting itself up.

The 'standard' way of utilising tooltypes is to provide a complete list of the tooltypes and comment out the inactive tooltypes. Unfortunately not all programmers follow this standard, so you may have to go digging through the program documentation to find out the available tooltype options.

It is a slight nuisance to have to select information for every Icon that you need to set up. Tooltype allows you to select the icon, and then use your preferred text editor to edit the tooltypes as required. When you quit the editor the tooltypes are saved back into the icon.

To demonstrate this, I have made a copy of the tooltype icon and called it AndysIcon. This is the same as the tooltype icon at this stage. So let's activate tooltype on AndysIcon and see what happens. (I am using the default options built into tooltype.)

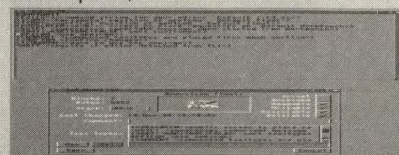
The first thing that happens is that an information box appears, and then a file list requester. Just select the required icon file to edit.



Once you have done that, the editor will open and you can modify the tooltypes to your heart's content.

All I have done in this case is remove the leading (from the APPICON option).

Save and exit from the editor and then have a look at the tooltypes with the Workbench information option,



If you had done this on the real tooltype program you would have found that an icon had been created on the Workbench and all that you would have needed to do was drag and drop the icon whose tooltypes that you wanted to modify onto it. This would eliminate the need for the file requester.

Tooltype has many options that you can select, the main option is to use whichever editor that you prefer, just edit the tooltypes! See the AmigaGuide documentation for more information.

When writing to Amiga Answers include as much information as possible about your system and about which software/hardware you are running. This will help to determine what your problem might be and its solution!

Send your questions to: Amiga Answers
Amiga User International,
4th Floor, Building 3, Carriage Row,
203 Eversholt Street, London NW1 1BW



Write to Reply

Bud Vennos gets his wish - an extended postbag - more pages again! But his temper still hasn't improved. . .

Dear AUI,
I am making pictures with an Amiga by using Photon Paint, Deluxe Paint etc, and I want to enter an art competition.

If you'll arrange an art competition please write to me about rules.

Secondly, I hear that Commodore Business Machines Inc. arranges an art competition each year. Also, please write me CBM's address.

Thank you very much for your kind interest.

Yours Sincerely

Mr Levent Suberk
Turkey

Dear Levent Suberk,
So you want to enter an art competition... Well, as you see from our very colourful pages, we carry lots of pictures supplied to us both by professional, some of whom are our reviewers, and also by interested amateur artists like yourself. I hope I am not insulting you by calling you an amateur because for all I know you might be Turkey's favourite artist and make oodles of Turkish pounds - I hope that is your currency - out of your skill with the Amiga and its software.

I know that we are always interested in receiving Amiga art from readers, so why don't you send us in some of yours and let us publish it if it is what we feel other readers would like to see?

Why should you need to have a competition? Is there something in you that wants to pit yourself against other artists? Is there more than a need for public recognition, an urge to conquer as well?

I am rather suspicious of setting one artistic creation against another or against many and asking someone to use what is always subjective judgement to decide which is

best. Beauty - and any aesthetic judgement - is said to be in the eye of the beholder. So what you might find stunning could be totally worthless to someone else. Stand by your own ideas and send us in some of your best work and we'll see if we can publish it.

As for Commodore, so far as I know they don't run any sort of competition of the kind you mention. I think that even if they did, they would have so much on their minds at the moment with the moribund state of their company that they probably would not be able to get their heads around such a thing. However, if you want to contact them their address is:

(As of now!) Commodore Business Machines (UK) Limited
The Switchback, Gardner Road
Maidenhead, Berks FL6 7XA
The reason I have given you the UK address when you asked for that of the US company is that at least the UK company is still in existence!

Dear Sir,
Some time ago I decided to produce an interactive instructional CD (aviation related) for the CD32 to fill a market niche.

I am equipped with Optonica's Interplay, an A4000 030 +1GB HD, SCSI as well as an A1200 with 030 and HD. I also have a Panasonic NV-S7 SVHS palmcorder and VIDI 24 digitiser as well as ADPRO, DPaint4 etc, and have signed up as a Commodore developer.

I am well versed in the project subject matter, so the text and sound files are not a problem, but not to put a too finer point on it, I am a lousy illustrator and animator.

Basically my artwork is not of

merchandise quality.

I have completed most of the "spadework" for this project and am reluctant to abandon it at this stage. Also I have plans for other related titles along similar lines. Is it possible for your magazine to put me in touch with any competent amateur "DPainters" or "Brilliant(c)ines" who may wish to get involved?

Thank you

Yours Faithfully

David Robinson
Bingham,
Notts NG13 8DY

Dear David Robinson,
Unfortunately we don't hold a list of competent amateurs who are expert in particular areas of Amiga activity. Though as you see from the letter above there are plenty of them out there who are working away with their Amigas. So we have included your address if anyone wants to get in touch with you.

Your project certainly seems an interesting one and the kind of project that because of the capabilities of the Amiga can now be carried out without the costs that would have been involved before such computing power became available to the average user.

When people doubt what benefits that computers bring they often fail to consider the way that computers like the Amiga have extended the reach of ordinary people into highly technical areas.

It's a little like the way the bicycle or the car have totally altered the mobility of people over the last hundred years. A century ago people hardly travelled away from their towns or villages unless they were wealthy. Now the individual of very limited means can move with a completely different freedom.

The computer, particularly with the accelerating growth in power and the dizzying fall in cost that we are now seeing, is doing the same thing for all sorts of other tasks and projects which would have been well out of our reach previously. And, as they say, we ain't seen nothing yet.

Especially if you think that the computer has been judged today as at the equivalent technical level the car had reached in 1912 after having been invented or begun its serious development only a dozen or so years before. When you cruise your automatic, air conditioned, airbagged, non-windresisting, reinforced safety sided, electric sunroofed, 40 miles to the gallon, central locking and, of course, computerised XR2 down the motorway at a spot on, effortless 70 miles an hour, think what cars were like in 1912 and also try to imagine what an equivalent level of progress might mean for computers... The mind boggles, doesn't it?

Dear Sirs,
I have just bought a copy of your July 1994 of Amiga User International with the Amiga CD Magazine #3. As I read the cover I was sure the CD would work on my Amiga with SCSI CD ROM drive (A570 compatible).....Wrong.

Do you have any plans to make CDs compatible with all Amiga with CD ROMs? I would buy and or subscribe to the magazine if it were compatible with my Amiga and CD.

Sincerely,

Stephen W. Laminack
Fairfield, CA, USA

Dear Stephen,
Why do all the European countries speak different languages? Why are there, I believe, eight different languages in China? (I have a three cassette course in Mandarin I acquired on trip to Singapore but shamefully haven't yet had the guts to start it - and I'm less likely to after finding that there are seven other languages that Chinese people speak.)

And why should I go on about different languages when all you asked about was whether we had any plans to make a CD that was compatible with CD-ROM. Because what you mean is not CD-ROM - because we have already produced a CD that was really CD-ROM for the cover of AUI, but a PC, in other words IBM compatible, Microsoft or Windows running CD. Isn't that what you meant?

Now that's, as they say in the Wizard of Oz, a horse of a different colour.

It's very unlikely, as present technology is, that we will produce a CD for the cover of this magazine, or any other Amiga magazine with

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c o n t i n u e d

an IBM compatibility because, understandably, Amiga users wouldn't be very pleased if they were offered something for which they had no use. There were a few moans of complaint when we created even Amiga-compatible, or at least CD32 or CDTV compatible, CDs as coverdisks, although everyone was offered replacement by floppy disks.

You can imagine what howls of protest would rise from Amiga users around the world if we tried to impose on them a CD-ROM of a Windows format.

Which brings me back to my original, and perhaps somewhat obscure point about languages. For languages read operating systems... there is a news item about IBM and Apple getting together on the PowerPC scene but still not being able to agree to a single operating system.

When, Trip Hawkins, the farsighted creator of Electronic Arts and the Deluxe Paint series that so well graced the Amiga set up his 3DO company in 1990 - with some ex-Amiga people too - the idea was to create a single, universal standard for computer/video games.

When Philips launched their CD-i a couple of years ago, they announced it was going to be a world standard.. Seems to me I've heard that tune before..

What any sensible person would want, any sensible person who is a user, is the ability to have a single standard operating system and let the manufacturers and developers compete on equal terms for our buying power. Doesn't it seem sensible that virtually all cars run on the same fuel? Doesn't it seem sensible that PCs, damn them, are sold on the basis that you only need to worry about which brand of machine you want or what kind of software you need, not about the operating system which you know will be MSDOS or nowadays Windows?

Isn't it comforting, to bring you back to your query, that all "CD-ROMs", no matter who has produced them or what their subject is, should be created with the same standard? And I hope that the same thing applies to video CDs, as they are supposed to be produced using the "whitebook" standard, created by none other than Philips, the inventors.

What we are stuck with, here at **AUI**, is the need to create CDs - or if it comes to that, floppy disks - for a small part of the computing world. And that naturally limits what we can do. Whose fault? You could blame Commodore for not getting into the PC world or more justly you could put the blame on Mame - that is human nature or the greed and selfishness and shortsightedness of computer manufacturers and even software companies who have pigheadedly stuck to their own small-minded interests and continued to produce for a painfully divided market. And they go on being unable to come to a reasonable agreement, as is instanced in the matter of IBM and Apple.

The only hope is, as I said in the previous letter, that perhaps we are still at such an early stage in the development of computing that change will bring a bit more commonsense and uniformity that would benefit us all.

And no, we don't have any plans at the moment to produce a "CD-ROM" for **AUI**!

Dear Bud,
Thank you and your buddies for an excellent magazine.

I am writing to you regarding the CD's mentioned as coverdisks in the latest Amiga User magazines.

I just bought July issue that states there is a CD that is A570 compatible included. Having an A570 I am interested in having access to this CD.

Only problem, a minor one I'm sure, there is no CD included with the magazine???

Regards,
Suzanna Ravaillion
Victoria, Australia

Dear Suzanna
(Or should it be, as in the song, Oh Suzanna, won't you marry me - and please take me away from all this confusion?)

I have just mentioned the Wizard of Oz - no relation, of course, unless you are the Sorceress of Oz who has changed the CD for the floppy... No, you can't be because that was not done by you down there who were thought to have been hanging upside down at the bottom of the world, but carried out

here in the antique, upright UK.

I believe it was explained in an earlier issue that when the CDs were covermounted, because the number of CD playing Amigas outside the UK was an unknown, while a CD was on the UK magazine, plus, of course, a floppy, there are only two floppies on the **AUIs** that, their little briefcases clutched close, took the plane and flew the coop to foreign parts. And I'm afraid that includes the ex-colonies too..

So you are not the only CD less from Oz. However, as a reward for writing to me, even if by not knowing your query had already been answered you show yourself to be an irregular reader of this magazine - shame! - we have arranged to send you the CD in question. I only hope that, as is supposed to happen with water going down the drain on the Southern Hemisphere is moving in a contrary direction to the way it goes up here in the North, the CD runs the right way around.. Don't hold us responsible if it doesn't!

Dear AUI,
With reference to Spencer Gibson of Leics problem regarding Citizen Print Manager, I would like to offer a solution.

After various conversations with Citizen this is how I understand their Print Manager to work.

1) Set up your program systems preferences as normal, e.g. EpsonX etc. Then run Citizen Print Manager and select the appropriate printer e.g. Citizen Swift 24E which will select the default settings best suited and work from there.

In other words, do not replace the EpsonX, LQ or whatever driver with the Citizen driver - Print Manager does this automatically at print time. If he still has problems Citizen technical people are very helpful and can be contacted on 0753 584111 or you may give him my phone number. This letter has been written on an Amiga 500 Plus, Citizen Swift 9 printer (that needs a new ribbon but using Citizen print Manager) and Final Copy using Courier font.

On another point, I am an occasional buyer of your magazine and a regular reader of another serious magazine but the quality of your CoverDisk has prompted me to buy yours as well.

However, I have a criticism of your layout in that it seems to me a bit garish, and I have found that your Answer/Letters pages in particular are straining my eyes with the bold print used for the query etc. (I am a mature Amiga user). Apart from that a good magazine.

Yours sincerely
Chris Mickley
Rochdale

Dear Chris,
Thank you for the very helpful solution to the Citizen Print Manager problem. I've no doubt that it will prove very useful to Spencer Gibson. What you probably don't realise that it will almost certainly come in very useful too for many other readers as well.

We publish letters that we think will interest not just the writer and me - ALL letters we get interest me, I'm just naturally curious. We publish letters because one person's viewpoint, or in the case of Andy Eskelson's Answers, problems, are often those of many others who haven't taken the trouble to write to us. They might be just suffering in silence or not have the energy to put pen or printer to paper - and somebody else has done it for them.

So your solution is likely to be appreciated by many more people than you might have thought. It has been guessed, not by me I hasten to add, that every letter a magazine receives represents a thousand readers' opinions. How they worked that out I don't know but it has a convincing ring about it. So I can tell you all that it is always worth writing to us and we welcome your letters, whether or not they really represent a thousand readers a time.

I say that because your letter, Chris, contains a complaint about the "lay out" of **AUI**, in fact about the bold type in my own column and that of the omniscient Andy. And I hope it doesn't represent a thousand others. I'm glad you pointed out that you need a new ribbon because your letter was very much on the faint side.

Before I drop into my "People who live in glasshouses shouldn't undress with the light on" - or even toss rocks about - mode, let me express my astonishment at your complaint. The whole point of bold type is too emphasise something. It doesn't as you suggest make it more difficult to read, at least not according to all the style guides since Gutenberg, it does just the contrary - makes it EASIER to read. Please note I have just put that in capitals - or as we call it in the trade "Upper Case" (because the capital letters actually used to be kept in a case above the small letters ("lower case")). The reason for U/C is again to emphasise, in other words draw attention to and the same applies to bold.

We draw attention to the readers' letters - and in so doing, believe it or not, make them easier to read. My own humble contributions are in italics - a font type classically used to signify movement and speed - probably because the Production Department is always groaning about how late I am getting my material - my copy - to them. And the rapidity I have to use to make my comments on readers who write to reply.

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No, the truth is that italics are a *way* of contrasting the typeface with the bold of the reader's letter. Once again in the attempt to make it easy to read both letter and answer.

It truly amazes me that you claim to find it difficult to read bold type - mature or not, as a person who has the same kind of eyesight as we assume the rest of Amiga users have. Take another gander at it, Chris, forget your prejudices, and compare the bold type with other usual ("roman") type, you will I'm sure discover a whole new way of looking at things.

Dear AUI,
Could you please give me a list of Back Issues (if you have any) and the price of them. Thank you.

Yours sincerely,
Richard Smallman
Staffordshire

Dear Richard,
Aha! Great words those - "If You Have Any". They should be carved on someone's tombstone - but not mine. Yes, we do have some back issues but they are not, due to a recent move to new and bigger offices, in any decent, proper, organised, structured, sensible order as should be maintained by any sensible body of people, a description which by no stretch of the imagination could be applied to anything I have ever been involved with.

So although I would surely like to tell you in authoritative tones that whichever back issue you would want could be available to you in a flash of our efficient system, the truth is that it can't. Nevertheless, scrabbling through boxes, draws, packing cases, handbags, purses, pockets and distracted brains, we can probably come up with any particular issue that you want. But I'm afraid you and other readers will have to tell us which one is required and we'll do our best.

Like everything else in this publishing world, we have resolved to do it all much better next month. Whether we will is another matter..

Dear AUI,
I feel bad, turururu
You know that I would now...
I feel bad, turururu

About two months ago I wrote to you with the same questions as Joao Traquino, a Portuguese guy and I didn't have an answer until now. Grrrr.

I also wanted to know if I could subscribe to AmigaCD.

I thought you didn't care about us continental readers, but you answered him in your November issue and even sent him the earlier CDs... I'm so mad that I feel like giving the two superdisks for my dog's lunch...

Please, please me ho yeh
like you pleased him...

P.S. - Sorry for the sarcastic words.

Your faithful reader and friend
Gaspar Palmeiro.

Querido Gaspar,
What are you talking about? We love our continental readers, especially those who send photos of themselves to us in short skirts sitting provocatively on their Amigas and offering passionately interesting holidays in the Algarve.... To be honest, we haven't received any letters like that yet and unless the name is Angelina or Katerina or Princessa de Eboli - and not Gaspar - we can do without the short skirt bit.

But inflamed with passion to satisfy our continental Amiga-using cousins we certainly are... which is why I have no idea what you are hablando about. Are you complaining that we have kept another Portuguese national happy? You should be delighted!

What haven't we done for you that we have done for him? As She Who Must Be Most Of The Time Obeyed Or Else is apt to remark at particularly inappropriate moments (She tends to talk in the royal "We" style then).

What is it you want, Oh Portuguese poet and no doubt Fado singer? Speak, or rather write, and thy wish shall be our command. The only thing that we can't do is bring back the Portuguese Empire, that is beyond even the powers of the Great AUI Editor. But would you really want it back, Gaspar? Look at the mess it was in when you left it..

Dear AUI,
I am writing to tell you that I own an Amiga 1200 and I bought it

brand new here in Belfast in February. It was a stand-alone one.

Since February I have been buying every issue of your brilliant magazine which I find very helpful to an Amiga 1200 owner.

Your coverdisks seem to be all that I ever buy in the line of software.

Rather than spend lots of money on full price games etc I find that there's more to be got out of your coverdisks.

I am also a shortwave radio listener and I hope to start an Amiga disk magazine soon for all Shortwave radio listeners in the U.K. and Eire who own an Amiga computer.

Through your magazine could I please ask if any of your readers who are into the hobby of Shortwave radio listening and who own an Amiga 1200 to please get in contact with me as I have a lot of information about this great hobby.

I am 21 years old and I have always grown up with computers. I started with the "ZX 81", then bought a "Spectrum 48K" and then a "Spectrum +2". Then I progressed to the ultimate "Commodore 64". Now I own the Amiga 1200 and it has been put to a lot of use!

I have enclosed a postcard with the answers to the "Samsung Printer Competition" on it. Could you please pass this on! I would love to win that printer as it would help me with my hobby of shortwave radio listening as I could print a monthly copy of a shortwave newsletter!

I am still somewhat of a newcomer to the world of Amiga. I shall continue buying your magazine for as long as my Amiga lives.

I look forward to many more brilliant Coverdisks.

Patrick Devlin
Belfast

Dear Patrick,
You and Andy Eskelson are on the same wavelength. He's been into radio for a long time and had you been a reader of AUI over the years you would have seen a number of articles by him on the very subject. If you care to write to him here at AUI, I'm sure you will find him very helpful.

We're glad you, and so many others, like the Coverdisks. A lot of work goes into them and they are, in some way, helping to do what we think the Amiga was created for - to bring a genuine sense of excitement to anybody with a little bit of knowledge and the enthusiasm to learn more.

We look forward to giving you "many more brilliant Coverdisks" for your obviously growing involvement with the world of Amiga. (But never use that "ultimate" word in

the presence of the Editor again - he hates the way it is used and may forbid me to print a letter which has it! "Ultimate" means last! That's what he says and he's the boss. (Yes, sir, yes sir, of course! Whatever you say, sir!)

Dear AUI,

As an avid antipodean reader of AUI for many years, I was delighted to see your successful challenge to the other Amiga magazines with the release of the first CD cover disk early this year. Since buying my A500 shortly after its release, I've enjoyed using it to hone my skills with operating systems, C and assembly language programming.

With my interest in public domain utilities, etc, I recently purchased a CD32 as a CD ROM file server for my A500, and your CD was the first compilation I used to show my friends the power of the CD32. While other magazines advertised they were going to produce a CD ROM, AUI just did it and the hours you all must have worked to achieve that, with success uncertain to the last too! I have been disappointed with the recent contents of the competition CD mags - you've packed your CD's with a wide range of material catering to all tastes, while a recent competing issue claimed a "first" putting demos on floppy cover disks. (Isn't this what reviewers keep hammering developers over??) While I can't judge from my one sample, you also appear to have been supplying both quality AND quantity. (Tip, to check how much of a CD ROM is used, put it in an Audio CD player and check the total "playing" time - 74 minutes is chockers.)

It's always a joy to use the Amiga after working with a Windows environment at work, and I still marvel at the ability of the Amiga to multitask with limited resources compared to its Intel rival. One could easily be forgiven for believing Microsoft was in cahoots with hardware manufacturers with the way Windows and its applications (particularly upgrades) gobble RAM and hard drive resources. Windows loves creating (and not deleting) temporary files; further deleting an icon doesn't delete the program file! I often wonder how many Windows users have unnecessarily upgraded their hard drive, when with a little bit of MSDOS knowledge (or a better GUI operating system), they could have saved themselves the expense! I recently regained nearly 20% of the storage allocated to my MS Mail messages on my work PC using an undocumented feature!

Before the cleanup process began, I was warned that this could take several hours, which it almost did on a 486/25! It did work.

I've recently purchased a Weird Science Network CD ROM (Which is well put together, even if lacking in accompanying documentation), and found the response to my mail order excellent (11 days to return of order!).

I built my own Amiga 500/CD32 interface and have concurrently developed an assembly program for my ancient Commodore 64 so I can use it as a keyboard for the CD32. Incidentally, the CD32 auxiliary interface supports both keyboard and serial interfaces simultaneously with the A500 keyboard working fine with the CD32; however mine still gets plenty of use with the 500- when my children aren't playing games on it! Sernet (When you finally work out how to get it working) is excellent, allowing you to change directories from your floppy based Amiga to the CD and/or run and load files from the CD drive, i.e. using it as a CD ROM server.

Good to see you have decided to place your excellent Utilities Cover Disks on the CD32 ROMs. One disappointment in buying the CD version was finding I'd missed out the utilities Superdisk 36. I correctly predicted you'd use the vast storage of the CD to include your earlier compilations in another first. Trouble is, the only issue to make it to Australia with the CD on the from was the May 1994 issue, so I still miss out! Is it possible to buy past issues of the Amiga CD! From you, (preferably using VISA as International Money Orders cost \$8.00 on top of the order amount)?

Finally, well done for your efforts in stabilising the Amiga market's future in uncertain times. Like you, I am confident the Amiga technology will find a home and your "Amiga Dimension" article in the July *AUI* was the best summary of Commodore's history and likely future I've read. Hopefully Commodore UK will now be able to continue their local success world wide.

Neil Matthews
Henley Beach
South Australia

Dear Neil,

Thank you for your kind words on the CDs. This month we seem to be well equipped with correspondents from Australia who are clearly receiving their magazines some time after they are available closer home here.

I wouldn't want to comment on the other magazines that have come into the Amiga CD32 field but the problem, as we discovered, is that

when you are creating a CD you are entering a whole new dimension. It isn't just the matter of it having so much more space. And you are correct in saying that there is plenty of room for the floppy material on there too. It is that we are, most of us, magazine publishing people. What the CD and its technology demand is the expertise and experience more allied to TV or films than simply putting coloured ink on paper.

The approach to production of material that we normally take is very much the wrong one for a multimedia environment. That may well have been a major difficulty for other magazine companies who are producing these CDs. It's a very much more costly and possibly creative affair when you are dealing with a multitude of media than just one. But those who know about the material, for example, the Amiga aren't movie-makers...

I believe they could have done better but didn't use their imagination. It's very easy to do just what you have always done because nobody is pushing you to come up with new ideas. I thought that the other discs I saw were little more than "big floppies" simply using the CD as an extended storage medium.

We, with our limited resources compared to some of the others, tried to push the whole medium forward by not treating it as a place to put the same stuff out as we would with a floppy but imagine it more as a genuine multimedia magazine - and create something that could only be thought of in the terms of that different technology.

That meant all the media should be used, including, of course, video. So we tried, not only to be the first but also to present our readers with a real advance on anything that could be done in any other medium. If you liked what we did then we succeeded and thank you for giving us the support you have.

As for the Windows environment being less flexible and certainly in its lack of multitasking less usable than the Amiga, I and almost everyone except the PC fanatics must agree. MSDOS was never a user friendly system and while Windows adapted the GUI that the Amiga and the Apple Macs had already been using for years, partly because of the limitations of the PC architecture, it still is unable to be anywhere near as flexible as the systems we are used to.

By the time next version, Windows 95, comes out then no doubt it will have improved. But that will only happen, as you rightly point out, at the cost of hugely memory hungry applications. True, memory costs are coming down but someone is gaining from the constant need for more power and it may not be the average user, the one who

has to pay for it.

Your comment on the filename being deleted but not the file itself reminds me of the case a few years back when a drugs smuggler finding that he was about to be arrested deleted the file that had names of his contacts. So that when the police got hold of his computer, he was confident that he had made the incriminating evidence disappear.

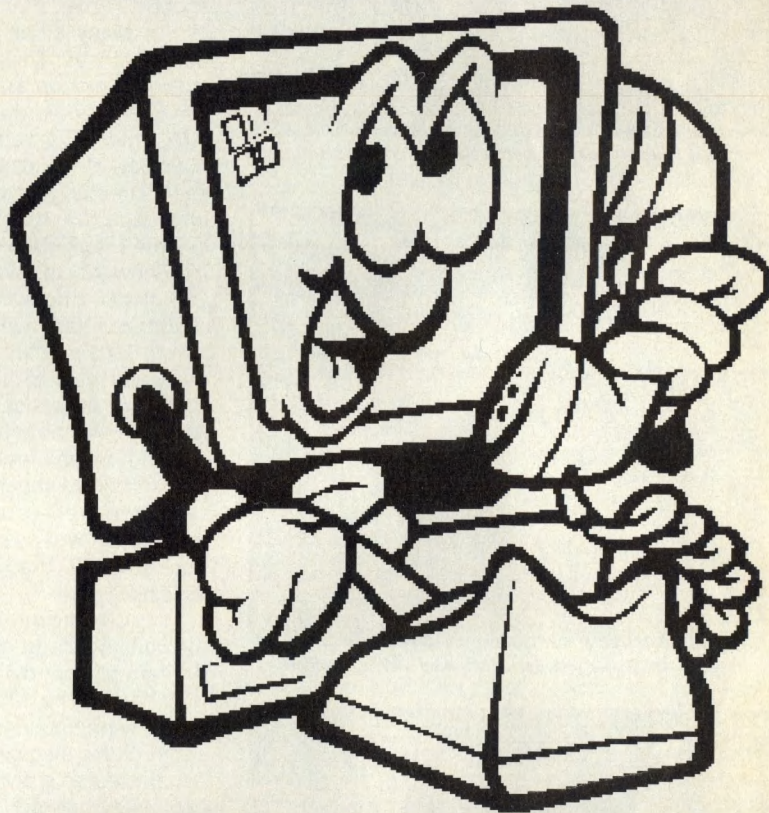
What he didn't realise was that, as you rightly say, the file is still there. Some intelligent searching by a police IT expert soon turned up the apparently deleted file. Collapse of one confident drugs smuggler.

And while we eat up praise of course, you might just have gone a little over the top in saying that we have stabilised the Amiga market's future in an uncertain world. If only we could! This IS an uncertain world and there will, I fear, never be very much stable about it any more. And that applies as much to us individually as to the Amiga. We just have to learn to live with uncertainty and to grin and bear it. As an Australian friend of mine used to say, "Don't quit and don't cry!". That's pretty good advice for all of us in this new year - which I hope will be a happier one for all Amiga users.

Send your letters to:
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Showing The Flag

◀ CONTINUED FROM PAGE 54



Ramiga drew the crowds to a Centre of Excellence.



Tony Ianeri's Power Computing showed the Viper range.



Digita's stand, worth stopping for a word with Jeremy Rihill.



Play the game at a still lively machine.

Un Hombre for the Amiga

Though appearing weary at the Show the CBM UK team who are making the bid to buy out the Amiga made themselves completely accessible for any Amiga user wanting to question them on the "Amiga situation". They were open and frank as far as they could be without being able to give that finally reassuring news that everyone wanted that CBM UK had now become Amiga International and completely in charge of the Amiga's future.

They clearly would have liked to be more definite but they had nothing definite themselves to go on.

David Pleasance, joint MD, did say that he was "99.0% sure that their bid would go through."

What they could say however was some of what they intended to do with the Amiga when they got it. Plans are well-advanced for the RISC-based chip that will drive it. The project is code named "Hombre", wittily Spanish for "man" as a partner for "Amiga", girl-friend in the same language.

The machine that is being planned for development will be a formidable workstation. It will have a speed "35 times as fast as a 4000". It will have MPEG, full screen, full motion video built onto the chip. It appears that the FMV chips are now much cheaper than when they were included in the FMV cartridges for the CD32.

There will also be CD-ROM as an integral part of the "Hombre" set up.

Most pleasing to the Editor of AUI who has been saying for years it was necessary, the Hombre will have complete Windows and possibly even MAC compatibility.

"That's not an Amiga" Someone commented.

But, hombre. maybe that's what could make it really special, an Amiga that isn't just an Amiga. Ole!

For the casual visitor no such worries seemed necessary and perhaps as a support for the games side of the Amiga, such companies as Ocean, Grem-lin and Virgin were there to sell, many at very cut prices, the huge and still growing variety of Amiga games. For the games player it was a positive Xmas shopping time.

Many other products too were on sale a bargain prices. These Shows are ideal for anyone looking to pick up a useful piece of software or even a long-desired hardware add-on. Janet Bickstaff, an AUI writer who with her husband John are the mainstay of the popular user group ICPUG, was seen cheerfully carrying a box containing a PC bridgeboard. It wasn't a new Pentium-level 586 one like the Emplant board Jim Drew demonstrated at the Show. No, this was the humble and antique pre-286 model. She wanted it for file transfer onto her A2000 and had found it there at just £9.99!

One product in the games side at the Show that wasn't yet into the cutprice range was European Challenge from Kick Off experts, Anco. Anil Gupta, Anco's boss, has been long a supporter of the Amiga and the crowds around the Anco stand were impressed by the sheer speed of European Challenge which was in effect being launched at the Show. It is the fastest ever seen on the 500, the proud Anco boss told AUI. The 1200 version is pretty nippy too, we saw.

Commodore mainly presented the Amiga in the games arcade, a large structure designed to let as many as possible keen shooters and bangers get their hands on a 1200 or a CD 32. This idea of the Amiga was supported by the games companies and some of the magazines who had stands. This, as usual, created a divide, physical and perhaps psychological, between them and the, for these shows, unusually higher level of activity of the serious, non-games side. The professional level of the Amiga was perhaps represented more in the style of the old AmiExpos of the USA. To allow potential buyers to see and use these very serious computing tools and not expect them to buy of the stands as if they were market stalls.

DPS who had their PAR board gained plenty of attention though not for just technical merits but but for some very attractive feminine stand attendants

who bore the tee-shirted message: Save Your Animation from Being Eaten Alive! Though from the hungry looks of the mostly male users who flocked to the stand, it was more likely the girls who were in need of rescue from being consumed.

On the DPS stand, Andrew Bishop of Premiervision - one of the companies who were also providing free seminars which proved very popular in the Amiga theatre - spent the rest of his time demonstrating products such as LightWave and other strong pro-style products to a permanent crowd of visitors.

It is clearly this, higher level field of activity that is starting to dominate the Amiga in spite of the years of it being sold as a mass market games machine. It is something that whoever rescues the Amiga would do well to recognise. From what was being said by senior members of the potential buyout team at the Show, this realisation seems already to be beginning to be accepted.

This World of Amiga Show may not have been obviously the situation that most people involved with the Amiga would have chosen. However, the quality of the higher level products coming on the scene that appeared there and the sense that the games field, the mass market of the past may not be easily recoverable meant that many visitors left with the impression that the Amiga when it returns could well be different from the past. The Amiga could become a force of which we could all be proud - no more sold as toy in the Xmas market but as a fullyfledged workstation type machine challenging anything out for power and capability. It would take a minor miracle? Stranger things have happened.

AUI

No, this is not the new Amiga.



MEN ONLY

June Williamson takes up the challenge thrown out for women to write for AUI and asks, "Is the computer world for men only?"

Sonia crouched low, waiting. She eyed the enemy carefully. In an instant, he leapt and she made her move. A strong up-percut reaped a satisfying splash of blood. She swept his feet from beneath him and it was over. She stooped to deliver the fatal kiss of death.

You probably recognise this scene, played out on computer games in thousands of teenage bedrooms all over the country. The only difference in this case is that both the game players were female.

It's not that girls don't play computer games. It's just that we're usually not as addicted as our male counterparts. This was borne out by a readers survey recently in the computer press which showed that women only made up 3.7% of their readership. Alarming, this was a drop on the previous year's figure.

Strange as it may seem, the

I like nothing better than an evening working out the day's frustrations on a computer game.

fairer sex don't seem as enthralled with the charms of a computer as our masculine counterparts.

I'm sure we all have our own ideas on the reasons for this, some more flattering than others, but it may help to see things from a female perspective.

Multiple Challenge

I picked up Mortal Kombat 2 last week for my Mega-Drive (yes, I own more than one platform - stop hissing in the background), after being assured by a male shop assistant that it boasted multiple female characters. I was disgusted to find only two female fighters. In my book, two does not equate with multiple.

In fact, two out of twelve says, in a very loud voice, we think girls

Some games manufacturers have woken up to the fact that 50% of the population is female

don't play beat-em-ups! Of course, this is utter tosh. I like nothing better than an evening working out the day's frustrations on a computer game.

Lets face it guys, I really don't want to play at being a man. Neither of the girls I play with ever take a male character. Strangely, according to my partner, men don't care about the sex of the sprite, only the abilities.

Male Domination?

A quick look around the software stores soon reveals that male domination is not only restricted to fighting games. Would it really have broken the bank to incorporate a choice of sex in Simon the Sorcerer? Sarah the Sorceress maybe?

Some games manufacturers have woken up to the fact that 50% of the population is female, with both Zool 2 and Mission Impossible 2045 offering a choice of sex. Yet the only game aimed squarely at girls was the very sad Barbie on the SNES. 'Nuff said.

Come on guys, I said 50%. That's a lot of money to the one who cracks the girls-don't-play-games taboo!

What we really need is more women in the industry. Argonaut Software were approached by the B.B.C. after approaches to other major companies failed to turn up a woman in the computer industry. Even at Argonaut, out of approximately twenty graphic artists, only five are female and there is only one woman in the thirty strong coding department. Still, they should be congratulated, it's better than most.

Steps are being taken to improve the imbalance. P.C. World's recent staff recruitment initiative in Northampton attracted fifty inquiries from women out of two hundred and fifty applicants.

If we look at attitudes to gender maybe we'll see some reasons for the bias against women in the computer industry. Women were once seen

Even at Argonaut, out of approximately twenty graphic artists, only five are female

as the carers and cleaners while men were the providers, the fighters. Now, 90% of the women are still doing housework while the men do their fighting on computers. The Chief Inspector stuck his proverbial size nines in it when he recently announced that a police woman came top in her advanced driving course; "Well done. I see the men have let you get away with it".

It seems men expect us to achieve less and be non-violent. Many girls actually adhere to this out-dated concept. Although the teacher of my karate class is female, only about one third of the students are women. The much respected Mensa group for bof-

fins are currently debating the reasons why only one third of their membership is taken up by women.

Another inhibiting factor for women is the attitudes of some of the computer mags. Many use the suggestion of sex to sell copy. With women readership in the minority, who can blame them?

Some women are their own worst enemy. One of my friends recently announced that she wouldn't know a computer if it kicked her up the bottom. How many intelligent career-minded men would you hear pass a comment like that?

With more non-violent games appearing such as Theme Park and the bloodless Elfmania, perhaps we are seeing recognition of the need for a more balanced approach to computing.

Incidentally, can we actually put some clothes on the women in compu-

Incidentally, can we actually put some clothes on the women in computer games please? Many of them look liable to catch cold.

ter games please? Many of them look liable to catch cold.

In conclusion, I can't speak for all members of the fairer sex, but I for one want shoot-em-ups, but I'd like more of a reason to shoot- them-up. I want beat-em-ups with multiple female characters, simulations that consist of more than simply piloting a 'real' aircraft around blocky 3D texture maps and adventure games with hero's I can identify with. After all, why can't a girl save the day? **AUI**



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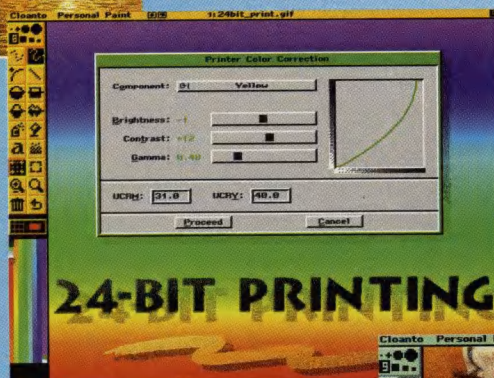
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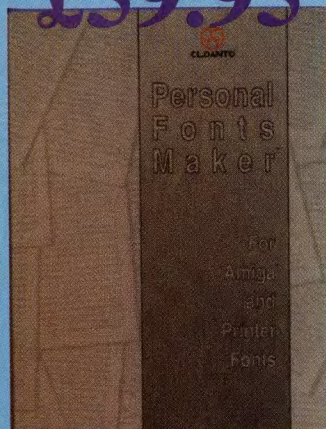
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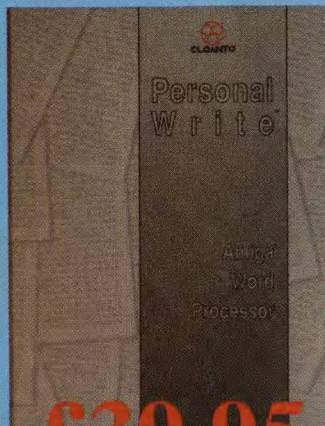


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